



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

April 13, 2005

U. S. Army Corps of Engineers  
Regulatory Field Office  
Post Office Box 1890  
Wilmington, NC 28402-1890

ATTN: Mr. Dave Timpy  
NCDOT Coordinator

Subject: **Nationwide Permit 6 Application** for replacement of Bridge No. 19 on  
NC 210 over Stones Creek, Federal Aid No. BRSTP-0210(3), State  
Project No. 8.1262101, WBS Element No. 33561.1.1, Onslow County,  
Division 3, TIP No. B-4215.

Dear Mr. Timpy:

The Geotechnical Unit is planning a foundation investigation for the above-referenced project. The NCDOT is providing written application because a portion of this work (two borings) is to be conducted within Stones Creek [DWQ Index No. 19-30-3], Class SA HW. The temporary surface water impacts total 8.5 square feet. A copy of the Categorical Exclusion (CE) for the bridge replacement is attached for reference. Although listed as a commitment in the CE, pursuant to comments received from the NC Wildlife Resource Commission (NCWRC) and the NC Division of Marine Fisheries (NCDMF), no anadromous fish moratorium is required. A consultant will be conducting the geotechnical investigation performing a minimum of six (6) borings, with four (4) borings to be located in the existing roadway, and two (2) borings to be located within Stones Creek. The boring locations are shown on the attached plan sheets. The latitude and longitude for the project are provided in the attached Pre-Construction Notification (PCN) document. The location of each boring is as follows:

<u>Boring Designation</u>	<u>Station</u>	<u>Offset</u>	<u>Location Description</u>
EB1-A	19+57	24' Lt	in existing roadway
EB1-B	19+57	24' Rt	in existing roadway
B1-A	20+23	24' Lt	in Stones Creek
B1-B	20+23	24' Rt	in Stones Creek
EB2-A	20+88	24' Lt	in existing roadway
EB2-B	20+88	24' Rt	in existing roadway

MAILING ADDRESS:  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

TELEPHONE: 919-715-1500  
FAX: 919-715-1501

WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

LOCATION:  
2728 CAPITOL BOULEVARD  
PARKER LINCOLN BUILDING, SUITE 168  
RALEIGH NC 27699

The four (4) borings to be installed in the existing roadway and one (1) of the borings to be located within Stones Creek (Boring Designation B1-B) will be performed utilizing a drill mounted on an ATV (All Terrain Vehicle) or a drill truck. The other boring to be located within Stones Creek (Boring Designation B1-A) will be performed using a drilling barge. The barge is constructed of two-foot deep baffles, is equipped with four (4) spuds and safety rails, and has a 12-foot wide X 30-foot long (360 square foot) working platform. The size and outfitting of the barge allows containment of drilling fluids and cuttings when working in sensitive environmental areas.

The size of each of the four (4) barge spuds is 0.4 ft in diameter. The total area within jurisdictional waters that may be temporarily disturbed by the placement of the barge for the performance of boring B1-A is approximately 0.5 ft<sup>2</sup> (0.125 ft<sup>2</sup>/spud). The size of each of the two (2) in-water boring is approximately 0.5 ft (6 in.) in diameter. The total area within jurisdictional waters that may be disturbed by performing the two (2) in-water borings is estimated to be 8 ft<sup>2</sup> (4 ft<sup>2</sup> per boring). The consultant will use casing to advance the borings and utilize rotary-wash techniques while recirculating the drilling fluids between the mud tub and the inside of the casing. This will isolate the drilling mud and cuttings and contain them in the boring and the mud tub. The borings will be backfilled with the cuttings and then sealed with bentonite hole plug. The excess drilling mud will be disposed of in the upland areas away from the High Quality Water (HQW). There will be no release of material (solid or liquid) into jurisdictional wetlands or surface waters during the performance of the on-land and in-water borings. The field activities are expected to take eight (8) days total.

## **AVOIDANCE & MINIMIZATION**

The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts, and to provide full compensatory mitigation of all remaining, unavoidable jurisdictional impacts. Specific measures taken to minimize impacts are as follows:

- Limiting to two (2) the number of borings within Waters of the United States.
- Utilizing casing to advance the borings to contain all drilling fluid and cuttings.
- Implementing and strictly enforcing Best Management Practices (BMPs) for protection of HQW.
- Disposing of drilling mud in the uplands, away from the HQW.

## **MITIGATION**

As the project impacts are temporary, no mitigation is proposed.

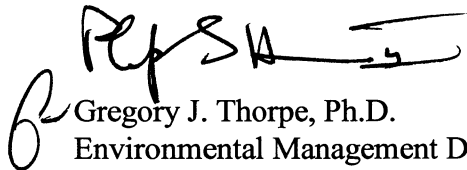
## **REGULATORY APPROVALS**

The NCDOT anticipates that these activities will be authorized by a Nationwide Permit No. 6 and the associated 401 General Certification No. GC3376. A completed PCN form

and appropriate drawings are attached for your review. All General Conditions of the Water Quality Certification will be met. Therefore, written concurrence from the North Carolina Department of Environment and Natural Resources, Division of Water Quality (DWQ) is not required. In accordance with 15A NCAC 2H.0501(a), we are providing two (2) copies of this application to DWQ for their records.

Thank you for your assistance with this project. If you have any questions or need additional information please call Bill Barrett at (919) 715-1624.

Sincerely,

  
Gregory J. Thorpe, Ph.D.  
Environmental Management Director, PDEA

Attachments: Pre-construction Notification  
Project drawings  
Categorical Exclusion (December 2003)

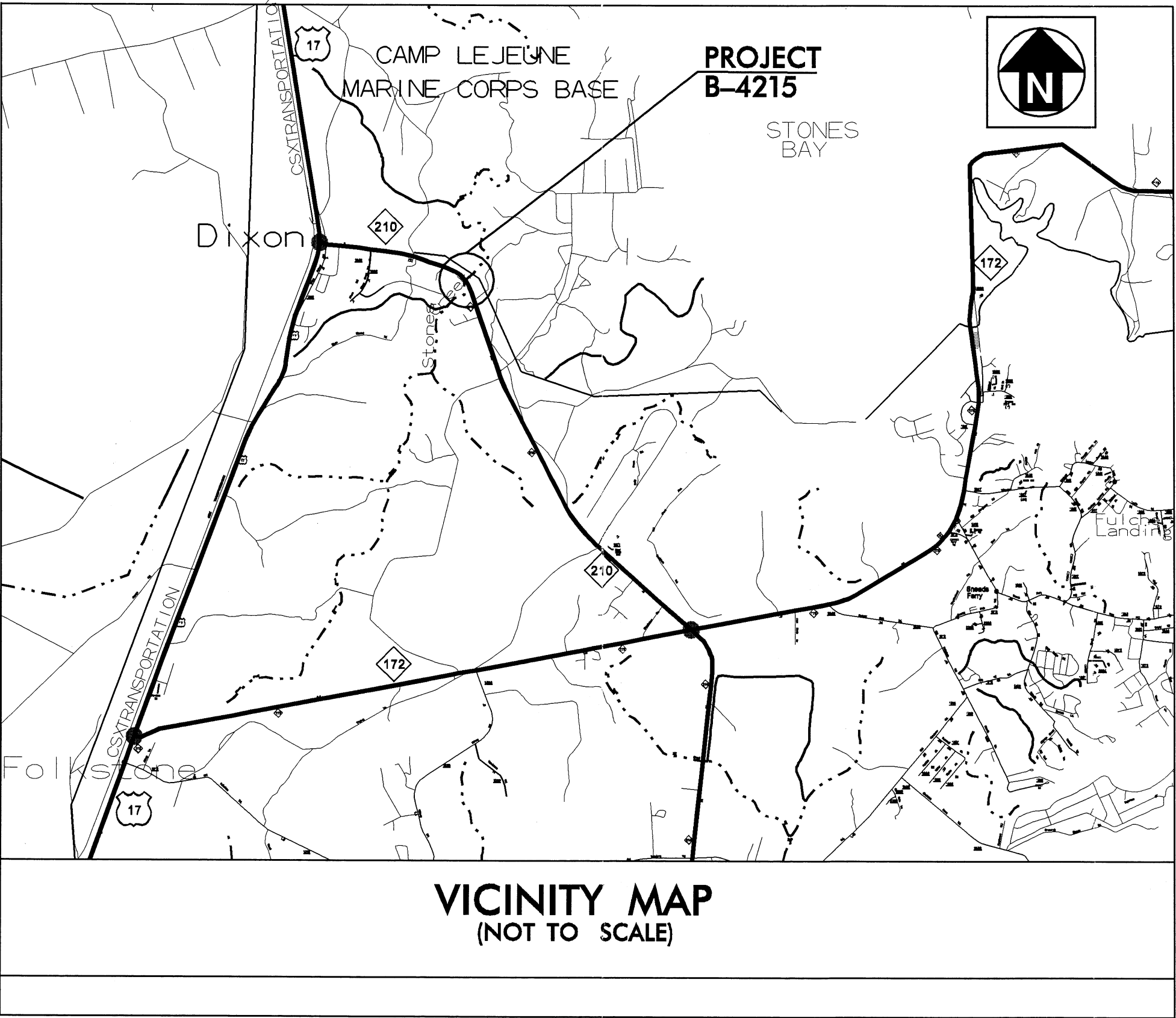
cc:

w/ attachment

Mr. John Hennessy, NCDWQ (2 copies)  
Mr. Travis Wilson, NCWRC  
Mr. Gary Jordan, USFWS  
Mr. Ron Sechler, NMFS  
Mr. Michael Street, NCDMF  
Ms. Cathy Brittingham, NCDCM  
Mr. Bill Arrington, NCDCM  
Dr. David Chang, P.E., Hydraulics  
Mr. Mark Staley, Roadside Environmental  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Njoroge W. Wainaina, State Engineering Geologist, P.E.,  
Geotechnical Unit  
Mr. H. Allen Pope, P.E., Division Engineer  
Mr. Mason Herndon, Division Environmental Officer

w/out attachment

Mr. Jay Bennett, P.E., Roadway Design  
Mr. Omar Sultan, Programming and TIP  
Mr. Art McMillan, P.E., Highway Design  
Mr. David Franklin, USACE, Wilmington  
Mr. Elmo Vance, P.E., PDEA Project Engineer





REVISIONS B-42/5

Project No:33561/1

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THE PROJECT  
IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY  
NADOT FOR MONUMENT "ATTACK"  
WITH NAD 83 STATE PLANE GRID COORDINATES OF  
NORTHING 1001070.00 EASTING 1000000.0000  
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT  
W/ROUND TO GRID IS 0.999998  
THE MC LAMBERT GRID BEARING AND  
LOCALIZED HORIZONTAL DISTANCE FROM STATION 10+00 TO  
"ATTACK" TO 50+ STATION 10+100 IS  
5.711141E 1.0410  
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
VERTICAL DATUM USED IS NAVD 83

-EL-

PI Sta 19+46.03  
 $\Delta = 52^\circ 31' 58.6" (RT)$   
 $D = 4^\circ 00' 00.0"$   
 $L = 1,313.32'$   
 $T = 706.89'$   
 $R = 1,432.39'$   
 $SE = 04$   
 $DS = 55$

-BL- 12 PINC II+14.30  
-EL- STA 17+23.98  
(34.38 LT.)

BEGIN CONSTRUCTION  
-EL- POC Sta. 15+10.00

-BL- 13 PINC 8+02.60  
NCGS "RISE"  
-EL- STA 14+17.66  
(17.09 LT.)

UNITED STATES MARINE CORPS  
MILITARY RESERVATION

ALLEN L. LANCASTER, ET UX  
DB 1460 PG 63  
MB 35 PG 59

2.5' CONC WALK

WALL

WALL

EDWARD J. COLLINS  
DB 732 PG 668  
MB 20 PG 36

BEGIN APPR. SLAB  
STA 19+31.19

END BRIDGE  
STA 20+87.77

-BL- IO PINC 19+57.12  
-EL- STA 25+57.50  
(19.64 LT.)

UNITED STATES MARINE CORPS  
MILITARY RESERVATION

$$\frac{-EL-PT Sta. 25+52.46}{\sqrt{}} = -EL-PINC Sta. 25+52.46$$

END CONSTRUCTION  
/-EL- POT Sta. 26+65.00

GEORGE V. YOPP  
DB 350 PG 155  
W11 99F29

TIP: B-4215

County: Onslow

Site Description:

Bridge 19 over Stones Creek  
on NC 210

BEGIN BRIDGE  
STA 19+57.73

END BRIDGE  
STA 20+87.77

BRID

~~BEGIN SHLD. BE RM. CTR.~~

CREEK IS THE PROPERTY LINE

**Office Use Only:**

Form Version May 2002

**USACE Action ID No.** \_\_\_\_\_**DWQ No.** \_\_\_\_\_

(If any particular item is not applicable to this project, please enter "Not Applicable" or "N/A".)

**I. Processing**

1. Check all of the approval(s) requested for this project:

☒ Section 404 Permit☐

Riparian or Watershed Buffer Rules

☐ Section 10 Permit☐

Isolated Wetland Permit from DWQ

☒ 401 Water Quality Certification

2. Nationwide, Regional or General Permit Number(s) Requested:
- NW -6

3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here:
- ☒

4. If payment into the North Carolina Wetlands Restoration Program (NCWRP) is proposed for mitigation of impacts (verify availability with NCWRP prior to submittal of PCN), complete section VIII and check here:
- ☐

5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here:
- ☐

**II. Applicant Information**

1. Owner/Applicant Information

Name: Gregory J. Thorpe, Ph.D., Environmental Management DirectorMailing Address: 1598 Mail Service CenterRaleigh, North Carolina 27699-1598Telephone Number: (919) 733-3141Fax Number: (919) 733-9794E-mail Address: gthorpe@dot.state.nc.us

2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)

Name: \_\_\_\_\_

Company Affiliation: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

### III. Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. Also provide a detailed **site plan** showing property boundaries and development plans in relation to surrounding properties. Both the vicinity map and site plan must include a scale and north arrow. The specific footprints of all buildings, impervious surfaces, or other facilities must be included. If possible, the maps and plans should include the appropriate USGS Topographic Quad Map and NRCS Soil Survey with the property boundaries outlined. Plan drawings, or other maps may be included at the applicant's discretion, so long as the property is clearly defined. For administrative and distribution purposes, the USACE requires information to be submitted on sheets no larger than 11 by 17-inch format; however, DWQ may accept paperwork of any size. DWQ prefers full-size construction drawings rather than a sequential sheet version of the full-size plans. If full-size plans are reduced to a small scale such that the final version is illegible, the applicant will be informed that the project has been placed on hold until decipherable maps are provided.

1. Name of project: Replacement of Bridge No. 19 over Stones Creek on NC 210
2. T.I.P. Project Number or State Project Number (NCDOT Only): B-4215
3. Property Identification Number (Tax PIN): N/A
4. Location  
County: Onslow Nearest Town: Dixon  
Subdivision name (include phase/lot number): \_\_\_\_\_  
Directions to site (include road numbers, landmarks, etc.): Bridge No. 19 on NC 210, just over 1 mile east of US 17.  
\_\_\_\_\_  
\_\_\_\_\_
5. Site coordinates, if available (UTM or Lat/Long): 34 35 07.29562, 77 27 43.80985  
(Note – If project is linear, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)
6. Property size (acres): 100' (ROW) X 1,150' (project length) = 111,500 sq. ft. = 2.56 acres
7. Nearest body of water (stream/river/sound/ocean/lake): Stones Creek
8. River Basin: White Oak  
(Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at <http://h2o.enr.state.nc.us/admin/maps/>.)
9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: The existing bridge is considered structurally deficient and functionally obsolete and is to be replaced. The area around the bridge is forested and rural. Camp Lejeune property is located adjacent to the bridge, to the east and north.

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10. Describe the overall project in detail, including the type of equipment to be used: see Cover Letter

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11. Explain the purpose of the proposed work: Geotechnical subsurface investigation for the replacement of highway bridge (Bridge No. 19).

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#### **IV. Prior Project History**

If jurisdictional determinations and/or permits have been requested and/or obtained for this project (including all prior phases of the same subdivision) in the past, please explain. Include the USACE Action ID Number, DWQ Project Number, application date, and date permits and certifications were issued or withdrawn. Provide photocopies of previously issued permits, certifications or other useful information. Describe previously approved wetland, stream and buffer impacts, along with associated mitigation (where applicable). If this is a NCDOT project, list and describe permits issued for prior segments of the same T.I.P. project, along with construction schedules.

N/A

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#### **V. Future Project Plans**

Are any future permit requests anticipated for this project? If so, describe the anticipated work, and provide justification for the exclusion of this work from the current application.

The actual bridge replacement is to occur and will require NW 23 permit and perhaps NW 33. Want to be able to proceed with geotechnical investigations.

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#### **VI. Proposed Impacts to Waters of the United States/Waters of the State**

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. The applicant must also provide justification for these impacts in Section VII below. All proposed impacts, permanent and temporary, must be listed herein, and must be clearly identifiable on an accompanying site

plan. All wetlands and waters, and all streams (intermittent and perennial) must be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts: see Cover Sheet\_\_\_\_\_

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2. Individually list wetland impacts below:

Wetland Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Located within 100-year Floodplain** (yes/no)	Distance to Nearest Stream (linear feet)	Type of Wetland***
		0			

\* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

\*\* 100-Year floodplains are identified through the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM), or FEMA-approved local floodplain maps. Maps are available through the FEMA Map Service Center at 1-800-358-9616, or online at <http://www.fema.gov>.

\*\*\* List a wetland type that best describes wetland to be impacted (e.g., freshwater/saltwater marsh, forested wetland, beaver pond, Carolina Bay, bog, etc.) Indicate if wetland is isolated (determination of isolation to be made by USACE only).

List the total acreage (estimated) of all existing wetlands on the property: 0.1

Total area of wetland impact proposed: 0

3. Individually list all intermittent and perennial stream impacts below:

Stream Impact Site Number (indicate on map)	Type of Impact*	Length of Impact (linear feet)	Stream Name**	Average Width of Stream Before Impact	Perennial or Intermittent? (please specify)
	Temp. - Borings	0.5 sq. ft.	Stones Creek	N/A	Perennial
	Temp. - Spuds	8 sq. ft.	Stones Creek	N/A	Perennial

\* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: culverts and associated rip-rap, dams (separately list impacts due to both structure and flooding), relocation (include linear feet before and after, and net loss/gain),

stabilization activities (cement wall, rip-rap, crib wall, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included.

- \*\* Stream names can be found on USGS topographic maps. If a stream has no name, list as UT (unnamed tributary) to the nearest downstream named stream into which it flows. USGS maps are available through the USGS at 1-800-358-9616, or online at [www.usgs.gov](http://www.usgs.gov). Several internet sites also allow direct download and printing of USGS maps (e.g., [www.topozone.com](http://www.topozone.com), [www.mapquest.com](http://www.mapquest.com), etc.).

Cumulative impacts (linear distance in feet) to all streams on site: \_\_\_\_\_

4. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.) below:

Open Water Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Name of Waterbody (if applicable)	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)
		0		

- \* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: fill, excavation, dredging, flooding, drainage, bulkheads, etc.

#### 5. Pond Creation

If construction of a pond is proposed, associated wetland and stream impacts should be included above in the wetland and stream impact sections. Also, the proposed pond should be described here and illustrated on any maps included with this application.

Pond to be created in (check all that apply): ☐ uplands ☐ stream ☐ wetlands

Describe the method of construction (e.g., dam/embankment, excavation, installation of draw-down valve or spillway, etc.): N/A

Proposed use or purpose of pond (e.g., livestock watering, irrigation, aesthetic, trout pond, local stormwater requirement, etc.): N/A

Size of watershed draining to pond: N/A Expected pond surface area: N/A

## VII. Impact Justification (Avoidance and Minimization)

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts.

The number of 'in-water' borings was limited to two (2). No borings are to occur within wetlands (see Cover Letter for additional avoidance and minimization measures).

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## VIII. Mitigation

DWQ - In accordance with 15A NCAC 2H .0500, mitigation may be required by the NC Division of Water Quality for projects involving greater than or equal to one acre of impacts to freshwater wetlands or greater than or equal to 150 linear feet of total impacts to perennial streams.

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on March 9, 2000, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

If mitigation is required for this project, a copy of the mitigation plan must be attached in order for USACE or DWQ to consider the application complete for processing. Any application lacking a required mitigation plan or NCWRP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ's Draft Technical Guide for Stream Work in North Carolina, available at <http://h2o.enr.state.nc.us/ncwetlands/strmgide.html>.

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.

N/A

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2. Mitigation may also be made by payment into the North Carolina Wetlands Restoration Program (NCWRP). Please note it is the applicant's responsibility to contact the NCWRP at (919) 733-5208 to determine availability and to request written approval of mitigation prior to submittal of a PCN. For additional information regarding the application process for the NCWRP, check the NCWRP website at <http://h2o.enr.state.nc.us/wrp/index.htm>. If use of

the NCWRP is proposed, please check the appropriate box on page three and provide the following information:

Amount of stream mitigation requested (linear feet): N/A  
Amount of buffer mitigation requested (square feet): N/A  
Amount of Riparian wetland mitigation requested (acres): N/A  
Amount of Non-riparian wetland mitigation requested (acres): N/A  
Amount of Coastal wetland mitigation requested (acres): N/A

**IX. Environmental Documentation (required by DWQ)**

Does the project involve an expenditure of public (federal/state) funds or the use of public (federal/state) land?

Yes ☒ No ☐

If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)?

Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation.

Yes ☒ No ☐

If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter.

Yes ☒ No ☐

**X. Proposed Impacts on Riparian and Watershed Buffers (required by DWQ)**

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to required state and local buffers associated with the project. The applicant must also provide justification for these impacts in Section VII above. All proposed impacts must be listed herein, and must be clearly identifiable on the accompanying site plan. All buffers must be shown on a map, whether or not impacts are proposed to the buffers. Correspondence from the DWQ Regional Office may be included as appropriate. Photographs may also be included at the applicant's discretion.

Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify \_\_\_\_\_)?

Yes ☐ No ☒ If you answered "yes", provide the following information:

Identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

Zone*	Impact (square feet)	Multiplier	Required Mitigation
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1		3	
2		1.5	
Total			

\* Zone 1 extends out 30 feet perpendicular from near bank of channel; Zone 2 extends an additional 20 feet from the edge of Zone 1.

If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Conservation Easement, Riparian Buffer Restoration / Enhancement, Preservation or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0260.

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**XI. Stormwater (required by DWQ)**

Describe impervious acreage (both existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property.

N/A

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**XII. Sewage Disposal (required by DWQ)**

Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.

N/A

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**XIII. Violations (required by DWQ)**

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?

Yes ☐ No ☒

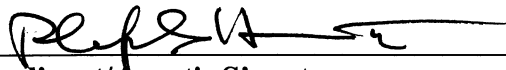
Is this an after-the-fact permit application?

Yes ☐ No ☒

**XIV. Other Circumstances (Optional):**

It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g., draw-down schedules for lakes, dates associated with Endangered and Threatened Species, accessibility problems, or other issues outside of the applicant's control).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



4/13/05

**Applicant/Agent's Signature**

**Date**

(Agent's signature is valid only if an authorization letter from the applicant is provided.)

NC 210  
Bridge No. 19 over Stones Creek  
Onslow County  
Federal-Aid Project No. BRSTP-0210(3)  
State Project No. 8.1262101  
T.I.P. No. B-4215

CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION


AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

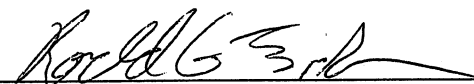
DIVISION OF HIGHWAYS

APPROVED:

12-17-03  
DATE

  
\_\_\_\_\_  
for Gregory J. Thorpe, Ph.D.,  
Environmental Management Director  
Project Development and Environmental Analysis Branch, NCDOT

12-17-03  
DATE

  
\_\_\_\_\_  
for John F. Sullivan, III  
Division Administrator  
Federal Highway Administration

NC 210  
Bridge No. 19 over Stones Creek  
Onslow County  
Federal-Aid Project No. BRSTP-0210(3)  
State Project No. 8.1262101  
T.I.P. No. B-4215

CATEGORICAL EXCLUSION

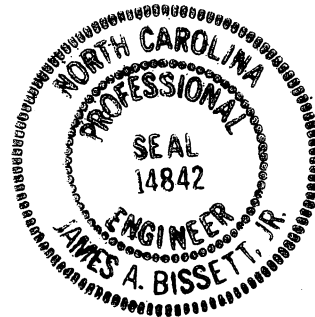
December 2003

Document Prepared by:  
Mulkey Engineers and Consultants  
Cary, North Carolina

12-15-03

Date

J. A. Bissett, Jr.  
J. A. Bissett, Jr., PE  
Branch Manager



12-15-03

Date

Pamela R. Williams  
Pamela R. Williams  
Project Manager

For the North Carolina Department of Transportation

12-15-03

DATE

Elmo E. Vance  
Elmo Vance  
Project Manager  
Consultant Engineering Unit

## PROJECT COMMITMENTS

NC 210  
Bridge No. 19 over Stones Creek  
Onslow County  
Federal-Aid Project No. BRSTP-0210(3)  
State Project No. 8.1262101  
T.I.P. No. B-4215

In addition to the standard Nationwide Permit No. 23 Conditions, the General Nationwide Permit Conditions, Section 404 Only Conditions, Regional Conditions, State Consistency Conditions, NCDOT's Guidelines for Best Management Practices for the Protection of Surface Waters, Design Standards for Sensitive Watersheds, Erosion and Sediment Control Guidelines for Contract Construction, Best Management Practices for Bridge Demolition and Removal, General Certification Conditions, and Section 401 Conditions of Certification, the following special commitments have been agreed to by NCDOT:

### ***Project Development and Environmental Analysis- Office of Natural Environment***

A bald eagle survey will be conducted one to two years prior to construction.

### ***Division***

An in-water construction moratorium will be in effect from February 15 to June 15 due to the potential for anadromous fish to occur in the project area. Stream Crossing Guidelines for Anadromous Fish Passage will be implemented, as applicable.

The construction and road closure will be coordinated with Camp Lejeune Military Base, Onslow County Schools Transportation, and Emergency 911 Dispatchers.

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**Bridge No. 19 over Stones Creek**  
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**INTRODUCTION:** The replacement of Bridge No. 19 is included in the North Carolina Department of Transportation (NCDOT) 2004-2010 Transportation Improvement Program (T.I.P.) and in the Federal-Aid Bridge Replacement Program. The location of the bridge is shown in Figure 1. No substantial environmental impacts are anticipated. The project is classified as a Federal "Categorical Exclusion."

**I. PURPOSE AND NEED**

The NCDOT Bridge Maintenance Unit records indicate that Bridge No. 19 has a sufficiency rating of 25.5 out of a possible 100 for a new structure and is considered structurally deficient and functionally obsolete. The replacement of this inadequate structure will result in safer and more efficient traffic operations by providing wider travel lanes and shoulders and improved load capacity.

**II. EXISTING CONDITIONS**

Bridge No. 19 is located on NC 210 over Stones Creek, just east of Dixon. NC 210 is classified as a rural major collector by the statewide functional classification system. It provides access for the many residents of Topsail Island and the Sneads Ferry area who work and shop in Jacksonville, and serves a regional demand during tourist season in Onslow County, when traffic volumes may double.

Land use in Sneads Ferry and Dixon is rural with a mix primarily of residential and agricultural uses including a small amount of commercial development. Jacksonville provides most of the urban amenities for rural residents. Camp Lejeune Marine Corps Base property is located along the north side of NC 210.

The 2003 estimated average daily traffic (ADT) volume is 8,550 vehicles per day (vpd). The projected ADT is 17,900 vpd by the design year 2030. The percentages of truck traffic is 4% dual tired vehicles (DUALS) and 3% truck-tractor semi trailer (TTST). The posted speed limit is 55 miles per hour (mph) {90 kilometers per hour (km/h)}.

Bridge No. 19 was built in 1942 with a clear roadway width of approximately 26 feet (7.9 meters), which provides for two 9-foot (2.7-meter) travel lanes with 4-foot (1.2-meter) shoulders. The bridge has five main spans and totals 90 feet (27 meters) in length. The deck and railings of the superstructure are composed of reinforced concrete slab. The substructure is composed of reinforced concrete abutments and reinforced concrete caps on timber piles. The bridge deck is approximately 20 feet (6 meters) from crown to streambed. Bridge No. 19 is not presently posted for single vehicle (SV) or truck-tractor semi trailer (TTST). The drainage area of Stones Creek at the proposed crossing is 6.61 square miles (17.1 square kilometers).

### **C. Alternatives Eliminated From Further Study**

**Alternative B** will replace the bridge in-place with an on-site detour located northeast (downstream) of the existing structure.

Alternative B was eliminated from further studies because of the additional impacts to the USMC property, potential environmental impacts to the stream and wetlands. Alternative B does not provide for a construction staging area. This alternative will require the relocation of several utilities. Alternative B is less economical than the preferred alternative.

The “do-nothing” alternative will eventually necessitate closure of the bridge. This is not desirable due to the traffic service and community connectivity provided by NC 210 and Bridge No. 19.

Investigation of the existing structure by the Bridge Maintenance Unit indicates that “rehabilitation” of this bridge is not feasible due to its age and deteriorated condition.

### **D. Preferred Alternative**

**Alternative A** was selected as the preferred alternative because it minimizes utility impacts, USMC property impacts, wetlands impacts, and is more economical. Use of an off-site detour will expedite construction.

The NCDOT Division Engineer concurs with Alternative A as the preferred alternative.

### **E. Anticipated Design Exceptions**

A design exception is anticipated for sight distance requirements for a design speed of 60 mph (100 km/h) due to the bridge being on a horizontal curve.

## **IV. ESTIMATED COST**

The estimated costs, based on current prices are as follows:

	<b>Alternative A (Preferred)</b>
Structure Removal (Existing)	\$ 22,680
Structure Proposed	300,000
Roadway Approaches	267,760
Miscellaneous and Mobilization	168,900
Engineering Contingencies	115,660
ROW/Const. Easements/Utilities	12,000
<b>TOTAL</b>	<b>\$887,000</b>

The project vicinity describes an area extending 0.5 mile (0.8 km) on all sides of the project study area.

## **B. Physiography and Soils**

The project study area is located in the lower Coastal Plain physiographic province of North Carolina. The topography in the project study area is generally characterized as nearly level. Elevations in the project study area range from sea level to approximately 20 feet (6.1 meters) above mean sea level (USGS 1988). The project study area consists of existing maintained right-of-way, urban disturbed areas, mixed hardwood forest, pine/hardwood forest, and clearcut areas. The existing land use within the project vicinity includes a mixture of residential areas and undisturbed land.

The project study area crosses four soil-mapping units (USDA 1992). These mapping units include Muckalee loam (Typic Fluvaquents), Marvyn loam (Typic Hapludults), Baymeade fine sand (Arenic Hapludults), and Pactolus fine sand (Aquic Quartzipsamments). Hydric soils mapped as occurring within the project study area include only the Muckalee series. Nonhydric soils that may contain hydric inclusions mapped as occurring within the project study area include the Marvyn series, Baymeade series, and Pactolus series. The Marvyn series is well drained but may contain inclusions of the hydric Muckalee series in narrow drainageways. The Baymeade series is well drained but may contain inclusions of the hydric Leon and Muckalee series in narrow depressions and drainageways. The Pactolus series is moderately well drained but may contain inclusions of the hydric Leon series in small depressions.

From a broader perspective, the project study area is located in one soil association, the Muckalee-Dorovan association (USDA 1992). This soil association contains nearly level, poorly drained soils that are loamy throughout and very poorly drained soils that are muck throughout.

## **C. Water Resources**

### **1. Waters Impacted**

The project study area is located within sub-basin 030502 of the White Oak River Basin (DWQ 2000) and is part of USGS hydrologic unit 03030001 (USGS 1974). Stones Creek is the only water resource likely to be impacted by the proposed bridge replacement project. Stones Creek originates south of the project study area near NC 172 and flows northeast to its confluence with the New River at Stones Bay. Stones Creek has been assigned Stream Index Number (SIN) 19-30-3 by the DWQ from its source to Stones Bay.

### **2. Water Resource Characteristics**

Stones Creek is a perennial stream with moderate flow over substrate consisting of mud, sand, and silt. Bottomland hardwood forest is adjacent to the stream channel. The channel ranges from approximately 15 to 30 feet (5 to 9 meters) wide and depths are estimated to range from 1 to 6 feet



1999). For the purpose of interpreting the definition of EFH: "Waters" include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; "substrate" includes sediment, hard bottom, structures underlying the waters, and associated biological communities; "necessary" means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle (NMFS 1999). An EFH Assessment is an analysis of the effects of a proposed action on EFH. Pursuant to 50 CFR 600.920 (g) mandatory contents include: a description of the proposed action, an analysis of the effects of that action on EFH, the Federal action agency's views on those effects; and proposed mitigation, if applicable. An adverse effect includes any impact which reduces the quality and/or quantity of EFH. Pursuant to 50 CFR 600.810 adverse effects may include direct (*e.g.*, contamination or physical disruption), indirect (*e.g.*, loss of prey, or reduction in a species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

Any substantial stream or river in a county under the jurisdiction of the Coastal Area Management Act (CAMA) may be considered EFH unless otherwise documented by the NMFS. The current species list prepared by the NMFS pertaining to EFH was reviewed, and all listed species are either marine or estuarine species. The portion of Stones Creek within the project study area is classified as "Coastal Waters" by the NCMFC but is not considered EFH.

#### **4. Permitted Dischargers**

Discharges that enter surface waters through a pipe, ditch or other well-defined point of discharge are broadly referred to as "point sources." Wastewater point source discharges include municipal (city and county) and industrial wastewater treatment plants and small domestic wastewater treatment systems serving schools, commercial offices, residential subdivisions, and individual homes (DWQ 1997). Stormwater point source discharges include stormwater collection systems for municipalities and stormwater discharges associated with certain industrial activities. Point source dischargers in North Carolina must apply for and obtain a National Pollutant Discharge Elimination System (NPDES) permit. Discharge permits are issued under the NPDES program, delegated to DWQ by the Environmental Protection Agency (EPA). Within subbasin 030502 there are now three major NPDES dischargers out of the total 32 permitted dischargers (DWQ 2000, DENR 2001). No NPDES dischargers are located on Stones Creek. Additionally, no major NPDES dischargers are documented as occurring in the downstream receiving waters of the project study area. Four of the five discharging facilities at Camp Lejeune ceased discharging in 1998 (DWQ 2000). The remaining discharger is located on the New River, upstream from the Stones Creek confluence.

Runoff from the road surface and nearby residential areas may contribute non-point source discharge to Stones Creek.

Under the guidelines presented in the documents noted in the first paragraph of this section, work done in the water for this project would fall under Case 2, which states that **no work shall be performed in the water during moratorium periods from February 15 to June 15 associated with fish migration, spawning, and larval recruitment into nursery areas.** This conclusion is based upon the classification of the waters within the project area and vicinity, and agency comments received from the North Carolina Wildlife Resources Commission.

## **D. Biotic Resources**

### **1. Plant Communities**

Distribution and composition of plant communities throughout the project study area reflect landscape-level variations in topography, soils, hydrology, and past and present land use practices. When appropriate, the plant community names have been adopted and modified from the NHP classification system (Schafale and Weakley 1990) and the descriptions written to reflect local variations within the project study area. Three natural plant communities occur within the project study area and one community results from human activities. These communities total approximately 10.19 acres (4.13 ha), which does not include the open water attributed to Stones Creek.

**Pine/Hardwood Forest** - Pine/hardwood forest covers approximately 1.16 acres (0.47 ha) [11.4 percent] of the project study area. This plant community is primarily located west of the existing bridge. Tree species consist of loblolly pine (*Pinus taeda*), sweetgum (*Liquidambar styraciflua*), and water oak (*Quercus nigra*). Midstory and shrub species consist of red maple (*Acer rubrum*), American holly (*Ilex opaca*), wax myrtle (*Myrica cerifera*), and buckeye (*Aesculus pavia*). Groundcover species consist of Japanese honeysuckle (*Lonicera japonica*) and jessamine (*Gelsemium sempervirens*).

**Mixed Hardwood Forest** – Mixed hardwood forest covers approximately 2.80 acres (1.14 ha) [27.5 percent] of the project study area. This plant community is located on the higher slopes above the floodplain of Stones Creek. Tree species include water oak, laurel oak (*Quercus laurifolia*), red maple, sweetgum, sycamore (*Plantanus occidentalis*), and American beech (*Fagus grandifolia*). Shrub species consist of wax myrtle, American holly, and buckeye. Groundcover species include Japanese honeysuckle, bracken fern (*Pteridium aquilinum*), and jessamine.

**Coastal Plain Bottomland Hardwood Forest** – Coastal plain bottomland hardwood forest covers approximately 2.28 acres (0.92 hectares) [22.4 percent] of the project study area. This community type is located at lower elevations than the mixed hardwood forest, which is primarily upland habitat. Dominant tree species include laurel oak (*Quercus laurifolia*), red maple, sweetgum, ironwood (*Carpinus caroliniana*), swamp tupelo (*Nyssa biflora*), sycamore (*Plantanus occidentalis*), American elm (*Ulmus americana*) and green ash (*Fraxinus pennsylvanica*). Shrub species consist of wax myrtle, elderberry (*Sambucus canadensis*), tag alder (*Alnus serrulata*), and dwarf palmetto (*Sabal minor*). Herbaceous species consist of sedges (*Carex* spp.), cardinal flower (*Lobelia cardinalis*), netted chain-fern (*Woodwardia areolata*), and Jack-in-the-pulpit (*Arisaema triphyllum*). Coastal

No terrestrial or arboreal amphibians were observed within the project study area. Terrestrial or arboreal amphibians expected to occur in and around the project study area include such species as southern leopard frog (*Rana utricularia*), and spring peeper (*Pseudacris crucifer*).

Avian species observed within the project study area include great blue heron (*Ardea herodias*), belted kingfisher (*Ceryle alcyon*), and green heron (*Butorides virescens*). Other species expected to occur in and around the project study area include such species as snowy egret (*Egretta thula*), great egret (*Ardea alba*), common yellowthroat (*Geothlypis trichas*), blue jay (*Cyanocitta cristata*), American crow (*Corvus brachyrhynchos*), and various warblers (*Dendroica* spp.).

Most of the terrestrial wildlife occurring in the project study area are typically adapted to life in or around fragmented landscapes, and overall impacts will be minor. Due to the lack of, or limited, infringement on natural communities, the proposed project will not result in substantial loss or displacement of known terrestrial animal populations. Wildlife movement corridors are not expected to be substantially impacted by the proposed project.

### 3. Aquatic Communities

The aquatic habitat located within the project study area includes Stones Creek and the adjacent littoral fringe, where regular flooding is evident. This littoral fringe is vegetated with such aquatic species as pickerelweed (*Pontederia cordata*), cattail (*Typha latifolia*), giant tearthumb (*Polygonum sagittatum*), and alligatorweed (*Alternanthera philoxeroides*).

Kick-netting, seining, dip-netting, and electroshocking were limited due to the unstable substrate. Visual observation of stream banks and channel within the project study area were conducted along Stones Creek to document the aquatic community. The unstable substrate prevented the use of the back-mounted electro-shocker, thus limiting the results of the fisheries survey.

Fish species documented in Stones Creek during the field investigation include eastern mosquitofish (*Gambusia holbrooki*) and bluegill (*Lepomis macrochirus*). Additional species that likely utilize this section of Stones Creek include yellow bullhead (*Ictalurus natalis*), pirate perch (*Aphredoderus sayanus*), redbreast sunfish (*Lepomis auritus*), and redfin pickerel (*Esox americanus*). Menhinick (1991) documents bay anchovy (*Anchoa mitchilli*) and the Atlantic menhaden (*Brevoortia tyrannus*) from Stones Creek and adjacent Stones Bay.

Coastal streams are often used by anadromous fish species such as striped bass (*Morone saxatilis*) and shad (*Alosa* spp. and *Dorosoma* spp.). Anadromous fish may occur in Stones Creek. Menhinick (1991) does not document any of these species from Stones Creek, but does document these species from the adjacent New River system. Menhinick (1991) does not document either the Atlantic sturgeon (*Acipenser oxyrinchus*) or the shortnose sturgeon (*A. brevirostrum*) as occurring in Stones Creek; however, he does document the Atlantic sturgeon from the New River Inlet area.

The NCWRC requested a moratorium on in-water work from February 15 to June 15 due to the potential for anadromous fish to occur in the project area.

erosion or run-off from affecting the stream channel. Bridge Demolition and Removal (BDR) will follow current NCDOT Guidelines. Best Management Practices (BMPs) for the protection of surface waters will be strictly enforced to reduce impacts during all construction phases including the BMPs for **HQWs**.

Aquatic wildlife may be temporarily displaced during the bridge replacement project. No long-term impacts are expected to result from this project. Anadromous fish species have been documented by Menhinick (1991) as occurring in the subbasin and may occur in the project study area. The NC Wildlife Resources Commission recommends following NCDOT's *Stream Crossing Guidelines for Anadromous Fish* to ensure that the replacement of the bridge will not impede anadromous fish. A moratorium on in-water work is requested from February 15 to June 15.

Resident aquatic species may be displaced during construction activities; however, anticipated impacts are expected to be minor and temporary.

## **E. Special Topics**

### **1. Waters of the United States**

Water bodies such as rivers, lakes, and streams are subject to jurisdictional consideration under the Section 404 program of the Clean Water Act (CWA). Additionally, wetlands are also considered "Waters of the United States" and are also subject to jurisdictional consideration. Wetlands have been defined by EPA and COE as:

Those areas that are inundated or saturated by groundwater at a frequency and duration sufficient to support, and under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas [33 CFR 328.3(b)(1986)].

Wetlands subject to review under Section 404 of the CWA (33 U.S.C. 1344) are defined by the presence of three primary criteria: hydric soils, hydrophytic vegetation, and evidence of hydrology at or near the surface for a portion (12.5 percent) of the growing season (DOA 1987).

One wetland type occurs within the project study area. The wetlands adjacent to the surface waters of Stones Creek exhibit characteristics of palustrine, forested, broad-leaved deciduous, seasonally flooded/saturated (PFO1E) wetlands pursuant to Cowardin *et al.* (1979). This wetland classification is consistent with a coastal plain bottomland hardwood forest. The surface waters within the channel of Stones Creek exhibit characteristics of riverine, lower perennial, unconsolidated bottom, permanently flooded (R2UBH) waters (Cowardin *et al.* 1979).

Jurisdictional wetland areas were delineated based on current COE methodology, and the areas were subsequently mapped with Trimble™ Global Positioning System (GPS) units. A Notification of Jurisdictional Determination from the COE dated January 2, 2002 concurred with delineated boundaries. Table 3 contains the approximate impacts to wetlands and surface waters.

The Commandant of the Coast Guard has given his advance approval to the construction of bridges across such waterways; therefore, an individual permit will not be required for this project.

Impacts to open water areas of Stones Creek are not expected due to the use of channel-spanning structures. During bridge removal procedures, NCDOT's BMP's will be utilized, including erosion control measures.

**Wetland Avoidance** – Due to the extent of wetlands and surface waters within the project study area, complete avoidance of jurisdictional impacts may not be possible.

**Minimization** – Minimization of jurisdictional impacts will be achieved by utilizing as much of the existing bridge corridor as possible. The following guidelines will be used during construction of this project: "Pre-Construction Guidelines for Bridge Demolition and Removal", "Policy: Bridge Demolition and Removal in Waters of the United States", and "Best Management Practices for Bridge Demolition and Removal." Guidelines followed for bridge demolition and removal are in addition to those implemented for Best Management Practices for the Protection of Surface Waters. If removal of the substructure will create disturbance in the streambed, a turbidity curtain will be used due to sediment concerns. Spanning of Stones Creek will also serve to minimize direct impacts to the stream channel.

If no practical alternative exists to remove the current bridge other than to drop it into the water, prior to removal of debris off-site, fill related to demolition procedures will need to be considered during the permitting process. A worst-case scenario will be assumed with the understanding that if there is any other practical method available, the bridge will not be dropped into the water. Permitting will be coordinated such that any permit needed for bridge construction will also address issues related to bridge demolition.

### **3. Mitigation**

Compensatory mitigation is not proposed for this project due to the limited nature of project impacts. However, utilization of BMPs is recommended in an effort to minimize impacts. Fill or alteration of more than 150 linear feet (45.8 meters) of stream may require compensatory mitigation in accordance with 15 NCAC 2H .0506(h). A final determination regarding mitigation rests with the COE.

## **F. Rare and Protected Species**

### **1. Federally Protected Species**

Species with the federal classification of Endangered (E) or Threatened (T), or officially proposed (P) for such listing, are protected under the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). The following federally protected species are listed for Onslow County (FWS list last updated February 25, 2003, search performed via web on December 15, 2003):

stray into freshwater bays, sounds, and large rivers. Nesting habitat for loggerhead sea turtles consists of ocean beaches.

Both the green sea turtle and leatherback sea turtle typically nest on sandy beaches in tropical areas. The green sea turtle is most commonly found in the Caribbean where they breed, although individuals, usually immatures, are occasionally found along the North Carolina coast. Although primarily tropical in nature, the range of the leatherback sea turtle may extend to Nova Scotia and Newfoundland (Martof *et al.* 1980). The leatherback sea turtle sometimes moves into shallow bays, estuaries, and even river mouths. The green sea turtle reaches lengths of 30 to 60 inches (0.8 to 1.5 meters) and weighs of 220 to 650 lbs. (100 to 295 kg), and has a smooth, heart-shaped shell (Martof *et al.* 1980). The leatherback sea turtle is distinguished by its larger size (46 to 70-inch [1.2 to 1.8-meter] carapace, 650 to 1,500 lbs. [295 to 680 kg]) and a ridged shell of soft, leathery skin. Green sea turtles are omnivorous, primarily eating jellyfish and seaweeds. The leatherback sea turtle also feeds extensively on jellyfish, although its diet often includes other sea animals and seaweed.

#### **BIOLOGICAL CONCLUSION: No Effect**

These species are not expected to occur in the project study area due to lack of nesting habitat and minimal feeding opportunities. NHP does not document any occurrences of this species within 1.0 mile (1.6 km) of the project study area as of December 20, 2001. This project will not have an affect on sea turtles due to the lack of suitable nesting and foraging habitat for these species.

**Piping plover** - Piping plovers are small shorebirds that occur along beaches above the high tide line, sand flats at the ends of sand spits and barrier islands, gently sloping foredunes, blowout areas behind primary dunes, and washover areas cut into or between dunes (FWS 1996a). Nests are typically found on open, wide sandy stretches of beach similar to those associated with inlets and capes.

#### **BIOLOGICAL CONCLUSION: No Effect**

There is no suitable habitat in the project study area for this species. NHP does not document any occurrences of this species within 1.0 mile (1.6 km) of the project study area as of December 20, 2001. The proposed project will not affect the piping plover or any suitable habitat.

**Eastern cougar** - The eastern cougar is a possibly extinct eastern subspecies of the widespread mountain lion species. This species was possibly extirpated from North Carolina by the late 1800's although recent sporadic sightings have been reported from remote areas of the Mountains and Coastal Plain (Lee 1987). Mountain lions are large, long-tailed cats; adult males may measure 7.0 to 9.0 feet (2.1 to 2.7 meters) total length with females averaging 30 to 40 percent smaller (Handley 1991). Adult mountain lion tracks measure approximately 3.5 inches (0.09 meters) (Lee 1987).

Recent specimens of mountain lion taken in North Carolina and elsewhere in mid-Atlantic states have proved to be individuals of other subspecies that have escaped or been released from captivity

with red-heart disease. Nest cavity trees typically occur in clusters, which are referred to as colonies. The woodpecker drills holes into the bark around the cavity entrance, which results in a shiny, resinous buildup around the entrance. This allows for easy detection of active nest trees due to the high visibility of the resin deposit at the cavity entrance. Pine flatwoods or pine savannas that are fire maintained serve as ideal nesting and foraging sites for this species. Development of a thick understory within a given area usually deters nesting and foraging. Potential nest sites for RCW's include pine and pine/hardwood stands greater than 60 years of age. Hardwood/pine stands (<50% pine) greater than 60 years of age may also be considered potential nesting habitat if adjacent to potential foraging habitat (Henry 1989).

Foraging habitat is typically comprised of open pine/mixed hardwood stands over 30 years of age (Henry 1989). Pines must comprise at least 60 percent of the canopy in order to provide suitable foraging for RCW's. Somewhat younger pine stands may be utilized if the trees have an average diameter at breast height (DBH) greater than or equal to 9 inches (0.2 meters). Foraging stands must be connected to other foraging areas or nesting areas in order to be deemed a viable foraging site. Open spaces or unsuitable habitat wider than approximately 330 feet (100 meters) are considered a barrier to RCW foraging.

#### **BIOLOGICAL CONCLUSION: No Effect**

No RCW nesting or foraging habitat was observed within the project study area. The pines located in the pine/hardwood forest community do not appear to be old enough for nesting and foraging would likely be inhibited due to thick groundcover and lack of a connection to other foraging or nesting areas.

NHP records document the known occurrence of RCW's within 1.5 miles (2.4 km) of the project study area. Several colonies were identified by NHP along NC 172 south of the project study area; and they were last observed in 1980. NHP does not document any occurrences of this species within 1.0 mile (1.6 km) of the project study area as of December 20, 2001. Project construction will not affect the RCW or any suitable habitat.

**Seabeach amaranth** - This species is an annual herb that grows on barrier island beaches. It is a succulent annual that is sprawling or trailing and may reach 2 feet (0.6 meter) or more in length. Inconspicuous flowers and fruits are produced in the leaf axils, typically beginning in July and continuing until frost. Primary habitat for seabeach amaranth consists of bare sand, especially on overwash flats at accreting ends of islands, and lower foredunes and upper strands of non-eroding beaches. The only remaining large populations are in coastal North Carolina (FWS 1996b).

#### **BIOLOGICAL CONCLUSION: No Effect**

No suitable habitat for seabeach amaranth (barrier beaches) occurs within the project study area. NHP does not document any occurrences of this species within 1.0 mile (1.6 km) of the project study area as of December 20, 2001. No impacts to seabeach amaranth will result from this project.

**BIOLOGICAL CONCLUSION: No Effect**

Suitable habitat for Cooley's meadowrue is not located within the project study area. Although Muckalee loam occurs within the project study area, the vegetative community types are not consistent with those associated with the known populations of Cooley's meadowrue. NHP does not document any occurrences of this species within 1.0 mile (1.6 km) of the project study area as of December 20, 2001.



### **3. Summary of Anticipated Impacts**

Three FSCs have been documented by the NHP as occurring within 3.0 miles (4.8 km) of the project study area. These three species include Venus flytrap, Carolina goldenrod, and awned meadowbeauty. All of the known occurrences are on Camp Lejeune property. The closest occurrence of Venus flytrap is approximately 1.5 miles (2.4 km) southeast of the project study area and was last observed in 1990. The closest known occurrence of Carolina goldenrod is approximately 1.3 miles (2.1 km) from the project study area and was last observed in 1992. The closest known occurrence of awned meadowbeauty is approximately 1.3 miles (2.1 km) away and was last observed in 1991. No FSCs were observed within the project study area during the field investigation

## **VI. CULTURAL RESOURCES**

### **A. Compliance Guidelines**

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and implemented by the Advisory Council on Historic Preservation's Regulations for Compliance Section 106, codified at 36 CFR Part 800. Section 106 requires Federal agencies to take into account the effect of their undertakings (federally funded, licensed, or permitted) on properties included in or eligible for inclusion in the National Register of Historic Places, and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings.

### **B. Historic Architecture**

A field survey of the Area of Potential Effects (APE) was conducted on May 2, 2002. All structures over 50 years of age within the APE were photographed, and later reviewed by the North Carolina State Historic Preservation Office (HPO). In a concurrence form dated October 1, 2002 the State Historic Preservation Officer (SHPO) concurred that there are no historic architectural resources either listed on or eligible for listing in the National Register of Historic Places within the APE. A copy of the concurrence form is included in the Appendix.

### **C. Archaeology**

The SHPO, in a memorandum dated December 20, 2002 stated, "There are no known archaeological sites within the proposed project area...it is unlikely that any archaeological resources that may be eligible for conclusion in the National Register of Historic Places will be affected by the project. We, therefore, recommend that no archaeological investigation be conducted in connection with this project." A copy of the SHPO memorandum is included in the Appendix.

The traffic volumes will not increase or decrease because of this project. There are no receptors located in the immediate project area. The project's impact on noise and air quality will not be substantial.

Noise levels could increase during construction but will be temporary. If vegetation is disposed of by burning, all burning shall be done in accordance with applicable local laws and regulations of the North Carolina SIP for air quality in compliance with 15 NCAC 2D.0520. This evaluation completes the assessment requirements for highway traffic noise (23 CFR Part 772) and for air quality (1990 CAAA and NEPA) and no additional reports are required.

An examination of records at the North Carolina Department of Environment and Natural Resources, Division of Water Quality, Groundwater Section and the North Carolina Division of Solid Waste Management indicates no hazardous waste sites in the project area. A field reconnaissance survey was conducted in the vicinity of the project. Based on the field survey, this project is not anticipated to impact USTs.

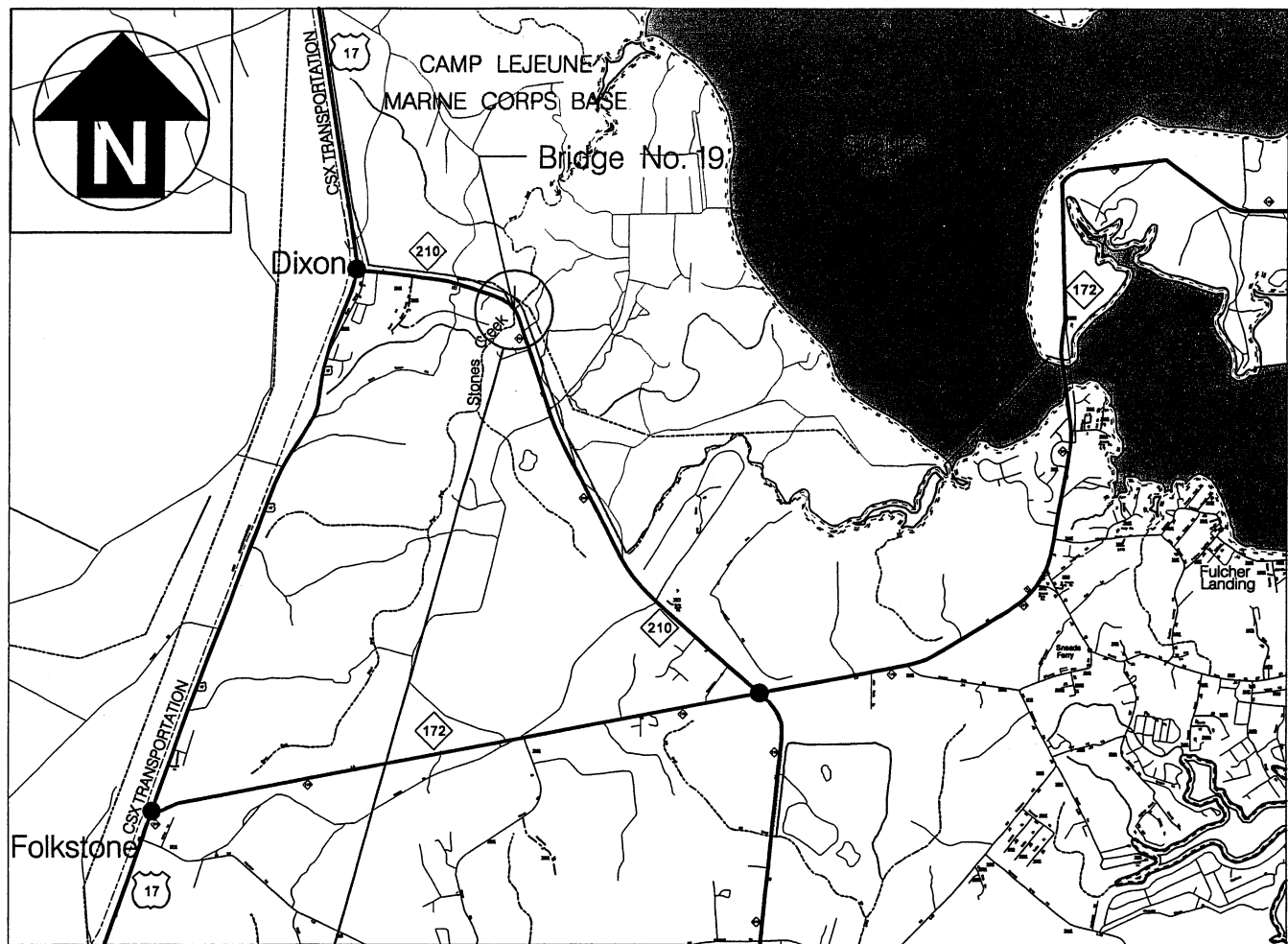
Onslow County is currently participating in the National Flood Insurance Regular Program. This project site on Stones Creek is within an approximate flood hazard zone. This project is not anticipated to have any adverse impacts on the existing flood plain. Attached is a copy of the Flood Insurance Rate Map, Figure 5, on which are shown the approximate limits of the 100-year flood plain in the vicinity of the project. There are no practical alternatives to crossing the floodplain area. Any shift in alignment will result in a crossing of about the same magnitude. This project is not expected to increase the level or extent of the upstream flood hazard.

On the basis of the above discussion, it is concluded that no significant adverse environmental effects will result from implementation of the project.

## **VIII. PUBLIC INVOLVEMENT**

Efforts were undertaken early in the planning process to contact local officials to involve them in the project development with scoping letters. Scoping letters were also sent to various agencies including the United States Marine Corps.

A workshop notice was mailed out in May 2003 to local officials and citizens notifying them of the preferred alternative and public workshop. An informal public workshop was held on June 19, 2003 at Dixon High School and the preferred alternative was displayed. Three citizens attended the workshop.



PROPOSED DETOUR ROUTE 7.4 MILES

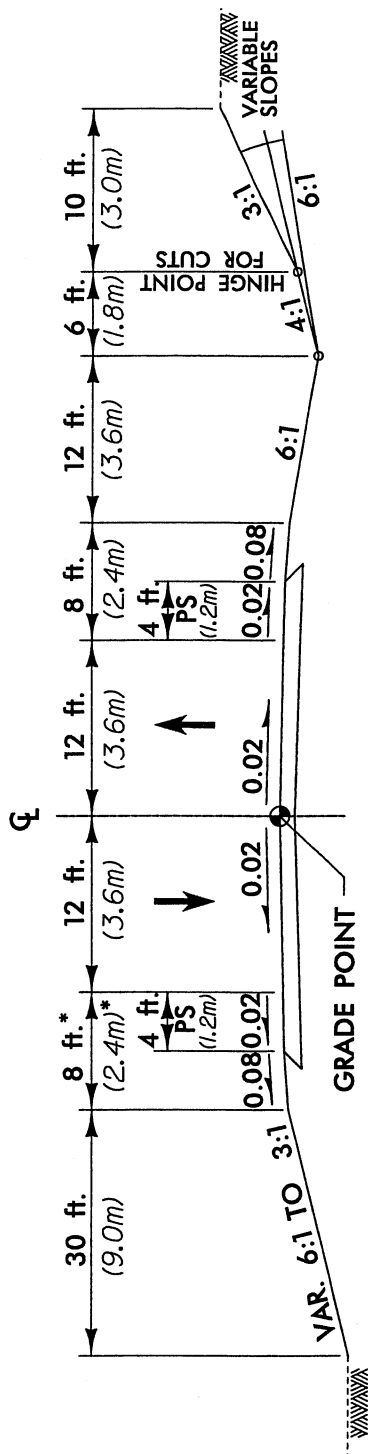


North Carolina Department of Transportation  
Project Development & Environmental Analysis

ONSLOW COUNTY  
BRIDGE NO. 19 ON NC 210  
OVER STONES CREEK  
B-4215

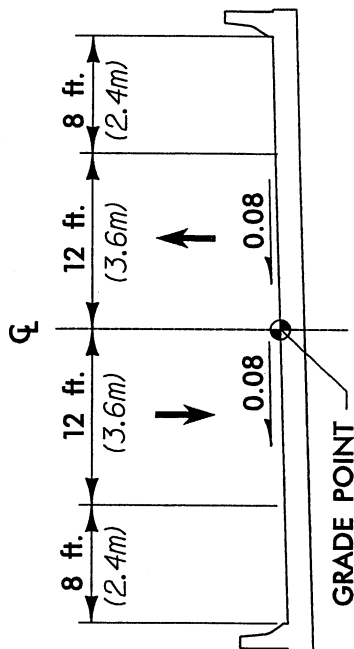
FIGURE 1





TYPICAL APPROACH SECTION  
(PROPOSED)

\* 11 ft. (3.3m) WHEN GUARDRAIL IS WARRANTED



TYPICAL BRIDGE SECTION  
(PROPOSED)

# TRAFFIC DATA

(EXISTING YR.)	2003 ADT =	8,550	LOS D
(CONST. YR.)	2005 ADT =	9,250	LOS D
(DESIGN YR.)	2030 ADT =	17,900	LOS E
DUAL	4%		
TTST	3%		

FUNCTIONAL CLASSIFICATION :  
MAJOR COLLECTOR - RURAL



North Carolina Department  
Of Transportation  
Project Development &  
Environmental Analysis

ONSLow COUNTY  
BRIDGE NO. 19 ON NC 210  
OVER STONES CREEK  
TIP NO: B-4215

FIGURE 3



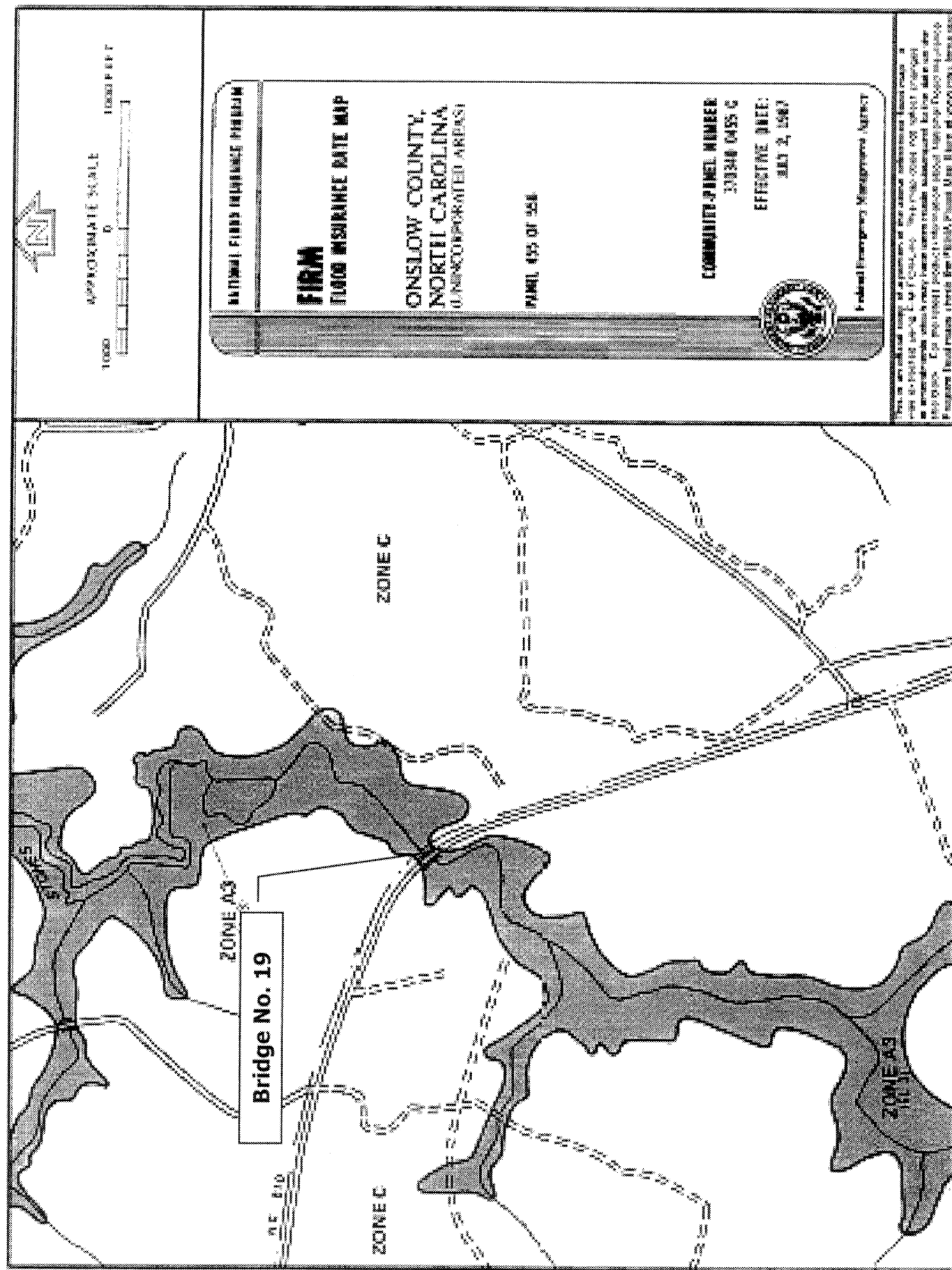
View of east approach  
looking across Bridge  
No. 19.

View of west approach  
looking across Bridge  
No. 19



Side view of  
Bridge No. 19

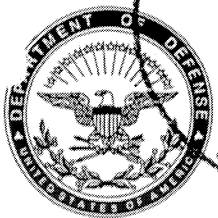




**FIGURE 5**

## **APPENDIX**





UNITED STATES MARINE CORPS

MARINE CORPS BASE

PSC Box 20004

Lejeune, North Carolina 28542-0004

IN REPLY

1000

IDD

12 DEC 2002

Dr. Gregory J. Thorpe, PhD.  
North Carolina Department of Transportation  
Project Development and Environmental Analysis  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dr. Thorpe:

This letter is in response to your request for input concerning the Department's proposed bridge replacement projects identified as B-4214 (US Highway 17 and New River) and B-4215 (NC Highway 210 and Stones Creek).

- Routing military vehicles through Jacksonville on Old Bridge Street is not an acceptable alternative due to current parking arrangements, volume of pedestrian traffic, and the width of certain portions of the route.
- Completion of the US Highway 17 Bypass Project prior to replacement of the bridges over the New River would significantly reduce the impact to the military community. Removal of both existing bridges over the New River on US Highway 17 prior to the completion of the US Highway 17 Bypass will result in significant delays for ambulance, law enforcement, and fire department personnel due to congestion on the Old Bridge Street alternate routing.
- The closing of NC Highway 210 during construction increases the response time for emergency services. This would include response time by: emergency services, fire department, and Base Forestry responses for wildfire suppression.
- Bridge replacement for NC Highway 210 should be designed to possess, at a minimum, a load class MLC-90 (90-ton capacity), and allow safe passage of vehicles twelve (12) feet in width.
- Any encroachment on Federal lands associated with the NC Highway 210 replacement will trigger a NEPA review.

1000

IDD

- New evacuation routes must be identified to manage traffic flows during evacuations due to dangerous weather situations.

If you have any questions or require additional information, please contact Mr. Dave Adkins, Installation Development Division, Installations and Environment Department, at telephone (910) 451-9448.

Sincerely,



K. R. SLATES  
Captain, U. S. Navy  
By direction of the  
Commanding General

1000  
IDD

cc: II MEF, G-4  
AC/S T&O  
AC/S TMO  
AC/S ISS

U.S. Department  
of Transportation

United States  
Coast Guard



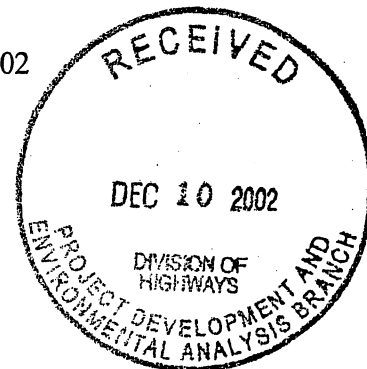
Commander  
United States Coast Guard  
Atlantic Area

431 Crawford Street  
Portsmouth, Va. 23704-5004  
Staff Symbol: (Aowb)  
Phone: (757)398-6587

D111 Goodwin

B-4215

16590  
03 DEC 02



Mr. Gregory J. Thorpe, Ph. D.  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Mr. Thorpe:

This is in response to your letter dated October 24, 2002 requesting the Coast Guard to review the proposed projects to replace the following nine bridges: Black River Over Flow, Black River, Jenny's Branch, Beaver Dam Creek, New River, Stone Creek, N.E. Cape Fear River, Withrow Creek and Pinch Gut Creek all located throughout North Carolina.

The Coast Guard Authorization Act of 1982 exempts bridge projects from Coast Guard bridge permits when the bridge project crosses nontidal waters which are not used, susceptible to use in their natural condition, or susceptible to use by reasonable improvement as a means to transport interstate commerce. Such conditions for some of these waterways were confirmed in a telephone conversation on November 27, 2002. Due to this, the bridge projects on Beaver Dam, Withrow, and Pinch Gut Creeks and Black River Over Flow are exempt, and will not require Coast Guard Bridge Permits.

Black River, Jenny's Branch, and Stone Creek are subject to tidal influence and thus considered legally navigable for Bridge Administration purposes. But these waterways also meet the criteria for advance approval waterways outlined in Title 33, Code of Federal Regulations, Section 115.70. Advance approval waterways are those that are navigable in law, but not actually navigated by other than small boats. The Commandant of the Coast Guard has given his advance approval to the construction of bridges across such waterways; therefore, an individual permit will not be required for these projects either.

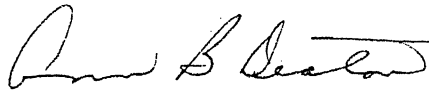
Further information is required to assess the bridge replacement projects over the New River and the North East Cape Fear River. Such information as, is the waterway affected by lunar tides? Is there any commercial navigation? What types and sizes of boats operate on the waterway? Bridge Permits may be required based on the answers to these questions. If a permit is required, a higher level of environmental review will also be required.

The fact that Coast Guard permits are not required for some of these projects does not relieve you of the responsibility for compliance with the requirements of any other Federal, State, or

16590  
03 DEC 02

local agency who may have jurisdiction over any aspect of the project. If you have any questions, please contact Terrance Knowles at the phone number or address show above.

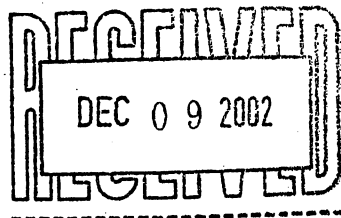
Sincerely,

A handwritten signature in cursive script, appearing to read "Ann B. Deaton".

ANN B. DEATON  
Chief, Bridge Administration Section  
By direction of the Commander  
Fifth Coast Guard District



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Habitat Conservation Division  
101 Pivers Island Road  
Beaufort, North Carolina 28516-9722



December 6, 2002

Gregory J. Thorpe, Ph. D.  
Environmental Management Director  
Project Development and  
Environmental Analysis Branch  
NC Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Attention: John Wadsworth, P.E.

Dear Dr. Thorpe:

The National Marine Fisheries Service (NOAA Fisheries) has reviewed your October 24, 2002, letter requesting comments on eight bridge replacement projects included in the North Carolina Department of Transportation 2002-2008 Transportation Improvement Plan. We understand that the NCDOT is preparing the planning and environmental studies necessary to process these projects as Categorical Exclusions and offers the following comments for your consideration:

The environmental documents for these projects should address measures designed to avoid and minimize loss of open water and wetlands that support fishery resources. In addition, we support findings contained in the May 9, 2002, letter from the Wilmington District, U.S. Army Corps of Engineers, which identified the following issues and concerns as being relevant to the proposed bridge replacement projects:

- Replacing bridges with culverts
- Permanent and temporary wetland losses
- Offsite versus onsite detours
- Time of year restrictions on instream work
- Treatment of wetland restoration areas
- Existing bridge demolition and removal
- Lengthening existing bridges as a wetland restoration measure

Group 1 - The following projects will have no impact on resources for which NOAA Fisheries has stewardship responsibility; therefore, we have no comments:



Bridge Number	Project Number	County
No. 416	B - 4103	Davidson County
No. 28	B - 4255	Rowan County
No. 54	B - 4282	Stokes County

Group II - These projects have the potential to affect fishery resources and their associated habitat for which NOAA Fisheries has stewardship responsibility:

Bridge Number	Project Number	County
No. 12	B - 1382	Sampson County
No. 26	B - 1382	Sampson County
No. 72	B - 4031	Brunswick County
No. 24	B - 4214	Onslow County
No. 21	B - 4223	Pender County

Bridges 12, 26, 21 and 24 are located in the Cape Fear and New River basins and in areas which provide habitat for anadromous fishery resources including American shad and river herring. Bridges 72 and 24 are located in areas with brackish to saline waters that also support estuarine dependent fishery resources such as spot, Atlantic croaker, and blue crab. In addition, these projects may affect **Essential Fish Habitat** for Federally managed species such as red drum and shrimp which are managed by the South Atlantic Fishery Management Council, and summer flounder which is managed by the Mid-Atlantic Fishery Management Council. Accordingly, we recommend that an Essential Fish Habitat Assessment be included in any environmental document for these projects.

Spawning and nursery habitat for anadromous and estuarine fishes may be adversely impacted by these projects unless measures to avoid and minimize impacts to waters and wetlands are included in the project plans. Therefore, NOAA Fisheries may recommend against Department of the Army authorization of these projects under Nationwide Permit 23 unless the following recommendations are incorporated:

1. Following impact avoidance and minimization, unavoidable wetland losses shall be offset through implementation of a compensatory mitigation plan that has been approved by the Corps of Engineers and in consultation with NOAA Fisheries.
2. All construction activities in waters and associated wetlands shall utilize techniques that avoid and minimize adverse impacts to those systems and their associated flora and fauna

Although the stated purpose of the project is to improve timber production, no information is provided regarding any ongoing silviculture operation. Furthermore, there is no indication of existence of a forest management plan for the site which might indicate that the existing excavation and filling of wetlands is in compliance with the Clean Water Act (CWA), Section 404 (f)(1)(A) exemptions for silviculture.

NOAA Fisheries concludes that the loss of wetlands at this site is highly detrimental to commercially, recreationally, and ecologically important fishery resources that utilize the Newport River. Therefore, we recommend that Department of the Army authorization not be granted in this case. We further recommend that if authorization is denied, the applicant should be required to restore pre-project elevations and contours and restore, through planting and other measures, all impacted wetlands.

Thank you for the opportunity to provide these comments. Related questions or comments should be directed to the attention of Mr. Ronald S. Sechler at our Beaufort Office, 101 Pivers Island Road, Beaufort, North Carolina, or at (252) 728-5090.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ron Sechler".

*for* Andreas Mager, Jr.  
Assistant Regional Administrator  
Habitat Conservation Division



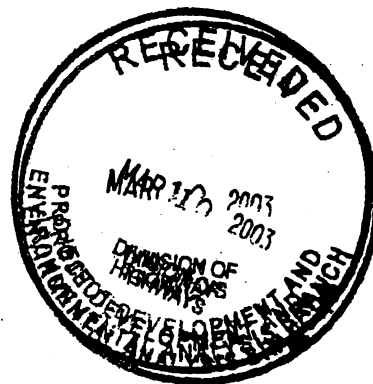


UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE

Habitat Conservation Division  
101 Pivers Island Road  
Beaufort, North Carolina 28516-9722

June 7, 2002

William T. Goodwin, Jr., PE, Unit Head  
Bridge Replacement Unit  
Project Development and Environmental Analysis Branch  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548



Dear Mr. Goodwin:

The National Marine Fisheries Service (NMFS) has reviewed the Natural Systems Technical Reports (NSTR) - Group 2, for 22 bridge replacement projects identified in your March 1, 2002, letter. These projects are scheduled for construction in fiscal year 2005.

By letter dated May 9, 2002 (copy enclosed), the Wilmington District, U.S. Army Corps of Engineers identified the following issues and concerns as being relevant to the proposed bridge replacement projects:

- Replacing bridges with culverts
- Permanent and temporary wetland losses
- Offsite versus onsite detours
- Time of year restrictions on instream work
- Treatment of wetland restoration areas
- Existing bridge demolition and removal
- Lengthening existing bridges as a wetland restoration measure

The NMFS agrees that these issues should be fully addressed with regard to impacts and mitigation. We also agree with the Corps' determination that identifying projects involving these activities as Green Light Projects is misleading and should not be used. Therefore, the following Group 2 projects should be identified as either Yellow or Red Light Projects.

**Section I - Yellow Light Projects (YLPs)**

The bridge replacement projects listed below are located in areas that do not support NMFS trust fishery resources. Otherwise, they have normal environmental concerns and, therefore, are identified as YLPs.



Bridge Number	Project Number	Location
Bridge No. 136	B - 4025	Beaufort County
Bridge No. 108	B - 4154	Hyde County
Bridge No. 118	B - 4235	Pitt County
Bridge No. 191	B - 4272	Sampson County

## Section II - Yellow Light Projects (YLPs)

The bridge replacement projects listed below are located in the Roanoke River, Neuse River, Tar River, Chowan River, Trent River, Cape Fear River basins which are likely to support NMFS trust anadromous fishery resources and are, therefore, classified as YLPs.

Bridge Number	Project Number	Location
Bridge No. 45	B - 4026	Bertie County
Bridge No. 29	B - 4314	Washington County
Bridge No. 10	B - 4086	Craven County
Bridge No. 46	B - 4125	Greene County
Bridge No. 49	B - 4126	Greene and Lenoir Counties
Bridge No. 43	B - 4127	Green County
Bridge No. 67	B - 4150	Hertford County
Bridge No. 7	B - 4169	Jones County
Bridge No. 5	B - 4187	Martin County
Bridge No. 21	B - 4223	Pender County
Bridge No. 69	B - 4227	Perquimans County
Bridge No. 98	B - 4234	Pitt County

Spawning and nursery habitat for anadromous fishes may be adversely impacted by these projects unless measures to avoid and minimize impacts to waters and wetlands are included in the project plans. Accordingly, the NMFS may recommend against Department of the Army authorization of these projects under Nationwide Permit 23, unless the following recommendations are incorporated:

1. Following impact avoidance and minimization, unavoidable wetland losses shall be offset through implementation of a compensatory mitigation plan that has been approved by the Corps of Engineers and in consultation with the NMFS.
2. All construction related activities in waters and associated wetlands shall utilize techniques that avoid and minimize adverse impacts to those systems and their associated flora and fauna.
3. In order to protect anadromous fishery resources that may utilize the project areas as spawning or nursery habitat, work in the waters of the creek shall be restricted to the period October 1 and March 1 of any year unless prior approval is granted by the Corps of Engineers following consultation with the NMFS.

### Section III - Red Light Projects (RLPs)

Red Light Projects are those that include extraordinary resources or concerns that will require close coordination to complete successfully. These projects involve high quality wetlands, extremely valuable or rare endangered species habitats, or other limited or unusual resources.

The bridge replacement projects listed below may effect estuarine waters, intertidal salt marshes, and tidal freshwater marshes and may be located in areas designated as primary nurseries by the North Carolina Division of Marine Fisheries or the North Carolina Wildlife Resources Commission. In view of the fact that work in these locations could adversely effect NMFS trust fishery resources, they are classified as RLPs. In addition, some of these project areas include Essential Fish Habitat (EFH) for species managed under authority of the Magnuson Stevens Fisheries Conservation and Management Act(P.L. 104-297) and other statutory and regulatory provisions. If these projects are processed under Nationwide 23, they will be carefully reviewed for incorporation of the recommendations listed above and we may elect to provide additional comments and recommendations that are intended to avoid, minimize, and offset impacts to living marine resources. Our recommendations, if any, will be sent to the Wilmington District, U. S. Army Corps of Engineers, and a copy will be forwarded to you.

Bridge Number	Project Number	Location
Bridge No. 77	B - 3611	Beaufort County
Bridge No. 72	B - 4031	Brunswick County
Bridge No. 19	B - 4215	Onslow County
Bridge No. 24	B - 4214	Onslow County
Bridge No. 65	B - 4219	Pamlico County
Bridge No. 4	B - 4221	Pamlico County

Finally, the shortnose sturgeon, a Federally protected species under the purview of the NMFS is found in the Cape Fear and Roanoke Rivers. These comments do not satisfy Federal agency consultation responsibilities under Section 7 of the Endangered Species Act of 1973, as amended. If any activity "may effect" listed species and habitats under NMFS purview, consultation should be initiated with our Protected Resources Division at 9721 Executive Center Drive North, St. Petersburg, Florida 33702.

We appreciate the opportunity for early participation in the review of these bridge replacement projects. If I can be of further assistance, please contact me at the letterhead address or at 252-728-5090.

Sincerely,



Ron Sechler  
Fishery Biologist

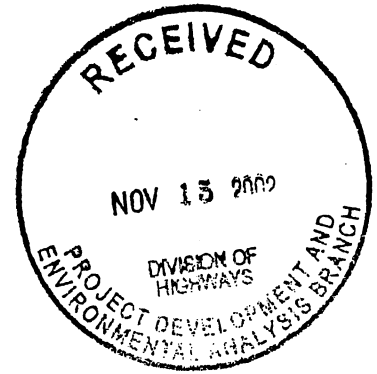


# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Raleigh Field Office  
Post Office Box 33726  
Raleigh, North Carolina 27636-3726

November 14, 2002



Dr. Gregory J. Thorpe  
Environmental Management Director  
North Carolina Department of Transportation  
Project Development and Environmental Analysis  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

This letter is in response to your request for comments from the U.S. Fish and Wildlife Service (Service) on the potential environmental impacts of the proposed replacement of several bridges in multiple counties of North Carolina. Please note that the projects listed for Davidson, Rowan and Stokes Counties in your October 24, 2002 letter were forwarded to the Service's Asheville Ecological Services Office for review. The following projects were reviewed by the Raleigh Ecological Services Office:

- B-1382, Sampson County, Replace Bridge No. 26 over the Black River Overflow and Bridge No. 12 over the Black River on NC 41;
- B-4031, Brunswick County, Replace Bridge No. 72 over Jinnys Branch (tributary to Saucepan Creek) on NC 179 (Beach Drive);
- B-4214, Onslow County, Replace Bridge No. 24 over the New River on US 17 (Marine Boulevard);
- B-4215, Onslow County, Replace Bridge No. 19 over Stone Creek on NC 210; and,
- B-4223, Pender County, Replace Bridge No. 21 over the North East Cape Fear River on NC 210.

These comments provide scoping information in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661-667d) and section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

For bridge replacement projects, the Service recommends the following general conservation measures to avoid or minimize environmental impacts to fish and wildlife resources:

1. Wetland, forest and designated riparian buffer impacts should be avoided and minimized to the maximum extent practical;
2. If unavoidable wetland impacts are proposed, every effort should be made to identify compensatory mitigation sites in advance. Project planning should include a detailed compensatory mitigation plan for offsetting unavoidable wetland impacts. Opportunities to protect mitigation areas in perpetuity via conservation easements, land trusts or by other means should be explored at the outset;
3. Off-site detours should be used rather than construction of temporary, on-site bridges. For projects requiring an on-site detour in wetlands or open water, such detours should be aligned along the side of the existing structure which has the least and/or least quality of fish and wildlife habitat. At the completion of construction, the detour area should be entirely removed and the impacted areas be planted with appropriate vegetation, including trees if necessary;
4. Wherever appropriate, construction in sensitive areas should occur outside fish spawning and migratory bird nesting seasons. In waterways that may serve as travel corridors for fish, in-water work should be avoided during moratorium periods associated with migration, spawning and sensitive pre-adult life stages. The general moratorium period for anadromous fish is February 15 - June 30;
5. New bridges should be long enough to allow for sufficient wildlife passage along stream corridors;
6. Best Management Practices (BMP) for Protection of Surface Waters should be implemented;
7. Bridge designs should include provisions for roadbed and deck drainage to flow through a vegetated buffer prior to reaching the affected stream. This buffer should be large enough to alleviate any potential effects from run-off of storm water and pollutants;
8. The bridge designs should not alter the natural stream and stream-bank morphology or impede fish passage. To the extent possible, piers and bents should be placed outside the bank-full width of the stream;
9. Bridges and approaches should be designed to avoid any fill that will result in damming or constriction of the channel or floodplain. If spanning the floodplain is not feasible, culverts should be installed in the floodplain portion of the approach to restore some of the hydrological functions of the floodplain and reduce high velocities of floodwaters within the affected area.

Enclosed are lists of species from Sampson, Brunswick, Onslow and Pender Counties that are on the *Federal List of Endangered and Threatened Wildlife and Plants*, as well as federal species of concern. Federal species of concern are not legally protected under the ESA and are not subject to any of its provisions, including section 7, unless they are formally proposed or listed as

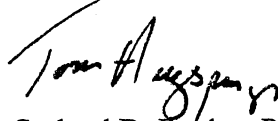
endangered or threatened. We are including these species in our response to give you advance notification and to request your assistance in protecting them if any are found in the vicinity of your project. Information about the habitats in which these endangered and threatened species are often found is provided on our web site, <http://endangered.fws.gov>. If suitable habitat for any of the listed species exists in the project areas, biological surveys for the listed species should be conducted. All survey documentation must include survey methodologies and results.

We reserve the right to review any federal permits that may be required for these projects, at the public notice stage. Therefore, it is important that resource agency coordination occur early in the planning process in order to resolve any conflicts that may arise and minimize delays in project implementation. In addition to the above guidance, we recommend that the environmental documentation for these projects include the following in sufficient detail to facilitate a thorough review of the action:

1. A clearly defined and detailed purpose and need for the proposed project;
2. A description of the proposed action with an analysis of all alternatives being considered, including the "no action" alternative;
3. A description of the fish and wildlife resources, and their habitats, within the project impact area that may be directly or indirectly affected;
4. The extent and acreage of waters of the U.S., including wetlands, that are to be impacted by filling, dredging, clearing, ditching, or draining. Acres of wetland impact should be differentiated by habitat type based on the wetland classification scheme of the National Wetlands Inventory (NWI). Wetland boundaries should be determined by using the 1987 Corps of Engineers Wetlands Delineation Manual and verified by the U.S. Army Corps of Engineers;
5. The anticipated environmental impacts, both temporary and permanent, that would be likely to occur as a direct result of the proposed project. The assessment should also include the extent to which the proposed project would result in secondary impacts to natural resources, and how this and similar projects contribute to cumulative adverse effects;
6. Design features and construction techniques which would be employed to avoid or minimize the fragmentation or direct loss of wildlife habitat and waters of the US;
7. If unavoidable wetland impacts are proposed, project planning should include a detailed compensatory mitigation plan for offsetting unavoidable wetland impacts.

The Service appreciates the opportunity to comment on these projects. Please continue to advise us during the progression of the planning processes, including your official determination of the impacts of this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520 (Ext. 32).

Sincerely,

  
for Garland B. Pardue, Ph.D.  
Ecological Services Supervisor

Enclosure

cc: Dave Timpy, USACE, Wilmington, NC  
John Hennessy, NCDWQ, Raleigh, NC  
David Cox, NCWRC, Northside, NC  
Chris Militscher, USEPA, Raleigh, NC

**Updated: 02/25/2003**

**U.S. Fish & Wildlife Service**

## ONSLOW COUNTY



### Critical Habitat Designation:

Piping Plover, *Charadrius melodus* - Critical Habitat designation in Federal Register 66:36038-36136, for a description of the primary constituent elements essential for the conservation of wintering piping plovers within the designated units. This document also contains a map and a description of each designated unit.

Common Name	Scientific Name	Status
<b>Vertebrates</b>		
<u>American alligator</u>	<i>Alligator mississippiensis</i>	T(S/A)
Bachman's sparrow	<i>Aimophila aestivalis</i>	FSC
<u>Bald eagle</u>	<i>Haliaeetus leucocephalus</i>	Threatened(Proposed for delisting)
Black rail	<i>Laterallus jamaicensis</i>	FSC
Carolina gopher frog	<i>Rana capito capito</i>	FSC
<u>Eastern cougar</u>	<i>Puma concolor cougar</i>	Endangered
Eastern painted bunting	<i>Passerina ciris ciris</i>	FSC*
<u>Green sea turtle</u>	<i>Chelonia mydas</i>	Threatened
Eastern Henslow's sparrow	<i>Ammodramus henslowii</i>	FSC
<u>Leatherback sea turtle</u>	<i>Dermochelys coriacea</i>	Endangered
<u>Loggerhead sea turtle</u>	<i>Caretta caretta</i>	Threatened
<u>West Indian Manatee</u>	<i>Trichechus manatus</i>	Endangered
Mimic glass lizard	<i>Ophisaurus mimicus</i>	FSC
<u>Piping Plover</u>	<i>Charadrius melodus</i>	Threatened
<u>Red-cockaded woodpecker</u>	<i>Picoides borealis</i>	Endangered
Southern hognose snake	<i>Heterodon simus</i>	FSC
<b>Invertebrates</b>		
Croatan crayfish	<i>Procambarus plumimanus</i>	FSC
<b>Vascular Plants</b>		



A quillwort	<i>Isoetes microvela</i>	FSC
Awned meadowbeauty	<i>Rhexia aristosa</i>	FSC
Boykin's lobelia	<i>Lobelia boykinii</i>	FSC
Carolina asphodel	<i>Tofieldia glabra</i>	FSC
Carolina goldenrod	<i>Solidago pulchra</i>	FSC
Carolina grass-of-parnassus	<i>Parnassia caroliniana</i>	FSC
Carolina spleenwort	<i>Asplenium heteroresiliens</i>	FSC
Chapman's sedge	<i>Carex chapmanii</i>	FSC
Coastal beaksedge	<i>Rhynchospora pleiantha</i>	FSC
Coastal Goldenrod	<i>Solidago villosicarpa</i>	FSC
<u>Cooley's meadowrue</u>	<i>Thalictrum cooleyi</i>	Endangered
Golden sedge	<i>Carex lutea</i>	Endangered
Hirst's panic grass	<i>Dichanthelium sp. 1</i>	FSC
Loose watermilfoil	<i>Myriophyllum laxum</i>	FSC
Many-flower grass-pink	<i>Calopogon multiflorus</i>	FSC
Pondspice	<i>Litsea aestivalis</i>	FSC
<u>Rough-leaved loosestrife</u>	<i>Lysimachia asperulaefolia</i>	Endangered
<u>Seabeach amaranth</u>	<i>Amaranthus pumilus</i>	Threatened
Spring-flowering goldenrod	<i>Solidago verna</i>	FSC
Thorne's beaksedge	<i>Rhynchospora thornei</i>	FSC
Venus flytrap	<i>Dionea muscipula</i>	FSC

**KEY:**

Status	Definition
<b>Endangered -</b>	A taxon "in danger of extinction throughout all or a significant portion of its range."
<b>Threatened -</b>	A taxon "likely to become endangered within the foreseeable future throughout all or a significant portion of its range."
<b>Proposed -</b>	A taxon proposed for official listing as endangered or threatened.
<b>C1 -</b>	A taxon under consideration for official listing for which there is sufficient information to support listing.
<b>FSC -</b>	A Federal species of concern--a species that may or may not be listed in the future (formerly C2 candidate species or species under consideration for listing for which there is insufficient information to support listing).
<b>T(S/A) -</b>	Threatened due to similarity of appearance (e.g., <u>American alligator</u> )--a species that is threatened due to similarity of appearance with other rare species and is listed for its protection. These species are not biologically endangered or threatened and are not subject to Section 7 consultation.
<b>EXP -</b>	A taxon that is listed as experimental (either essential or nonessential). Experimental, nonessential endangered species (e.g., red wolf) are treated as threatened on public land, for consultation purposes, and as species proposed for listing on private land.

Species with 1, 2, 3, or 4 asterisks behind them indicate historic, obscure, or incidental records.

\*Historic record - the species was last observed in the county more than 50 years ago.

\*\*Obscure record - the date and/or location of observation is uncertain.

\*\*\*Incidental/migrant record - the species was observed outside of its normal range or habitat.



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Raleigh Field Office  
Post Office Box 33726  
Raleigh, North Carolina 27636-3726

June 12, 2002

Mr. William T. Goodwin, Jr.  
North Carolina Department of Transportation  
Project Development and Environmental Analysis  
Unit Head, Bridge Replacement Planning  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Mr. Goodwin:

This responds to your letters of March 1 and March 18, 2002, providing the U. S. Fish and Wildlife Service (Service) with Natural Resources Technical Reports (NRTR) on 26 bridges proposed for replacement in Construction Fiscal Year (CFY) 2005. Your letters requested the Service to review these reports and determine the level of concerns we might have for trust resources under our jurisdiction. This report provides scoping information in accordance with provisions of the Fish and Wildlife, Coordination Act (FWCA) (16 U.S.C. 661-667d) and Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543). This report also serves as initial scoping comments to federal and state resource agencies for use in their permitting and/or certification processes for this project.

The bridges scheduled for replacement are:

1. B-3611, Bridge No. 77 on NC 99 over Pantego Creek, Beaufort County;
2. B-4024, Bridge No. 136 on SR 1626 over Pantego Creek [Canal?], Beaufort County
3. B-4026, Bridge 45 on SR 1110 over Choowatic Creek, Bertie County;
4. B-4028, Bridges Nos. 12 and 18 over the Cape Fear River, Bladen County;
- 5. B-4031, Bridge No. 72 on NC 179 over Jinnys Branch, Brunswick County;
6. B-4077, Bridge No. 25 on NC 130 over Waccamaw River outflow, Columbus County
7. B-4082, Bridge 280 on SR 1843 over Dan's Creek, Columbus County;
8. B-4086, Bridge No. 10 on SR 1111 over Brices Creek, Craven County;
9. B-4090 - Bridge No. 125 on NC 24 over Cross Creek, Cumberland County;
10. B-4125, Bridge No. 46 on SR 1091 over Wheat Swamp Creek, Greene County;
11. B-4126, Bridge No. 49 on SR 1434 over Wheat Swamp Creek, Greene and Lenoir Counties;
12. B-4127, Bridge No. 43 on SR 1438 over Rainbow Creek, Green County;
13. B-4150, Bridge No. 67 on SR 1118 over Ahoskie Creek, Herford County;
14. B-4154, Bridge No. 108 on SR 1340 over Old State Canal, Hyde County;
15. B-4169, Bridge No. 7 on SR 1129 (Free Bridge Road) over Big Chinquapin Branch Jones County;

- 16. B-4187, Bridge No. 5 on SR 1417 over Conoho Creek, Martin County;
- 17. B-4214, Bridge No. 24 on US 17 over the New River, Onslow County;
- ~~18. B-4215, Bridge No. 19 on NC 210 over Stones Creek, Onslow County;~~
- 19. B-4219, Bridge No. 65 on SR 1304 over an unnamed tributary to the Neuse River, Pamlico County;
- 20. B- 4221 , Bridge No. 4 on SR 1344 over South Prong Bay River, Pamlico County;
- 21. B- 4223, Bridge No. 21 on NC 210 over the Northeast Cape Fear River, Pender County;
- 22. B-4227, Bridge No. 69 on SR 1222 over Unnamed tributary to Mill Creek, Perquimans County;
- 23. B-4234, Bridge No. 98 on SR 1407 over Conetoe Creek, Pitt County;
- 24. B-4235, Bridge No. 118 on SR 1538 over Grindel Creek, Pitt County;
- 25. B-4248, Bridge No. 170 on SR 1101 over Shoe Heel Creek (Gaddy Mill Road), Robeson County;
- 26. B-4272, Bridge No. 191 on SR 1845 over Great Coharie Creek, Sampson County; and,

### **General Scoping Comments**

Some NRTRs contained only maps of the immediate project site and a verbal description of the project location. In reviewing our records of known locations for Federally listed species, it would be beneficial to the Service to have a map showing the location of the project. Each location map should include at least one municipality or sizable community to facilitate locating the project area.

The title page for B-4024 (Beaufort County) states that Bridge No. 136 on SR 1626 is over "Canal." The body of the report states that this bridge crosses Pantego Creek which appears to be the correct designation. Title pages should reflect the correct location of the project.

### **General Fish and Wildlife Habitat and Wetlands**

For each project, we recommend the following conservation measures to avoid or minimize adverse environmental impacts to fish and wildlife resources:

1. Wetland impacts should be avoided and minimized to the maximum extent practical as outlined in Section 404 (b)(1) of the Clean Water Act Amendments of 1977. Areas exhibiting high biodiversity or ecological value important to the watershed and region should be avoided. Wherever appropriate, construction in sensitive areas should occur outside fish spawning and migratory bird nesting seasons.
2. Off-site detours should be used rather than construction of temporary, on-site bridges. For projects requiring an on-site detour in wetlands or open water, such detours should be aligned along or adjacent to existing, roadways, utility corridors, or previously developed areas in order to minimize habitat fragmentation and encroachment. At the completion of construction, the entire detour area, including any previous detour from past construction

activities, should be entirely removed and the impacted areas should be planted with appropriate, endemic vegetation, including trees if necessary;

3. If unavoidable wetland impacts are proposed, every effort should be made to identify compensatory mitigation sites in advance. Project planning should include a detailed compensatory mitigation plan for offsetting unavoidable wetland impacts. Opportunities to protect mitigation areas in perpetuity, preferably via conservation easement, should be explored at the outset;
4. In waterways that may serve as travel corridors for fish, in-water work should be avoided during moratorium periods associated with migration, spawning, and sensitive pre-adult life stages. The general moratorium period for anadromous fish is February 15 - June 15;
5. Best Management Practices (BMP) for Protection of Surface Waters should be implemented; and,
6. Activities within designated riparian buffers should be avoided or minimized.

### **Federal Species of Concern and State Listed Species**

Federal Species of Concern (FSC) are those plant and animal species for which the Service remains concerned, but further biological research and field study are needed to resolve the conservation status of these taxa. Although FSCs receive no statutory protection under the ESA, we would encourage the NCDOT to be alert to their potential presence, and to make every reasonable effort to conserve them if found. The North Carolina Natural Heritage Program should be contacted for information on species under state protection.

### **Federally Protected Species**

Several NRTRs make determinations that a project will not affect a particular species, primarily plants based on surveys in the recent past. The Service believes such determinations are premature and that additional surveys will be required prior to construction in approximately 2004-2005. It would be more appropriate to note that the species was not found during preliminary surveys and that results provide early indications that the project is not likely to adversely affect the species.

Effect determinations for plants based on surveys within the project area may require work at a particular time of year for accurate identification. The biological conclusions of the NCDOT for plants should include the time of year that a survey was conducted, the person hours of surveying, and the approximate size of the area surveyed. Surveys should be done within two or three years of actual construction for those species inhabiting stable and/or climax communities. Plant species that utilize disturbed communities, e.g., Michaux sumac (*Rhus michauxii*) and Cooley's meadowrue (*Thalictrum cooley*), should be done within two years of actual

construction if vegetation disturbing activities, e.g., regular mowing or timber harvesting, occur at the project site.

The NCDOT should carefully consider potential impacts to the West Indian manatee (*Trichechus manatus*) of bridge replacement projects in coastal counties. Several NRTRs, e.g., B-4235 (Pitt County), state that manatees require at least five feet of water. Manatees are able to use shallow channels that may not seem suited for such a large mammal. O'Shea and Ludlow (1992) wrote that the primary habitat requirements for the species are access to vascular aquatic plants, freshwater source, and proximity to channel 1-2 meters deep (3.3 -6.6 feet). Therefore, the NCDOT should only consider reaching a "no effect" determination for the manatee when water depths at the project site do not rise above one meter. Manatees may become entangled in erosion control and siltation fences placed in shallow water. Measures to prevent these devices from harming manatees are addressed in our 1996 guidelines to NCDOT (USFWS 1996). The biological conclusion of the NCDOT on impacts to manatees cannot be based on negative visual surveys of the project area. These mobile animals may not inhabit a given area for extended periods, and manatees may move into a given project site where the species has never been reported previously. The best procedure for ensuring the safety of these endangered mammals is to follow the Service's precautions if the area is suitable manatee habitat.

Surveys for mussels should extend 100 meters (328 feet) upstream and 300 meters (984 feet) downstream from the project site. Environmental documentation that includes survey methodologies, results, and NCDOT's recommendations based on those results, should be provided to this office for review and comment.

If surveys for a Federally protected species should determine that a given project would adversely affect the species, a biological assessment (BA) may be prepared to fulfill the section 7(a)(2) requirement and in determining whether formal consultation with the Service is necessary. Please notify this office with the results of the surveys for the listed species that may occur in the project area. Please include survey methodologies and an analysis of the effects of the action, including consideration of direct, indirect, and cumulative effects.

### **Project Specific Comments**

In addition to the general comments applicable to all bridge replacement project, we offer the following project-specific comments:

B-3611, Bridge No. 77 on NC 99 over Pantego Creek, Beaufort County - The NRTR states (p. 16) that habitat for the manatee exists in the project area, but that no manatees were seen during natural resources investigations. The report concludes that the project would have "no effect" on the manatee. The Service does not concur with this determination. Manatees are seasonal transients in North Carolina from (primarily June through October). As noted, potential impacts on this species cannot be based on limited field inspections. The Service recommends that future project documentation include

commitments to follow procedures given in "Precautions for General Construction in Areas Which May Be Used by the West Indian Manatee in North Carolina" that the Service provided the NCDOT in 1996. A copy is provided with this letter.

Intertidal zones and marsh edges preferred by Federally threatened sensitive jointvetch (*Aeschynomene virginica*) are present in the project area, but the species was not observed during natural resources investigation. The NRTR provided a biological conclusion of "no effect." The Service will require additional surveys closer to the time of actual construction and greater details of survey methodology, including time of year and the intensity of the survey, before we can concur that the project will have no effect on the species.

The NRTR states that "marginal habitat exists for rough-leaved loosestrife [*Lysimachia asperulaefolia*] in the form of shallow organic soils adjacent to a forest community" in the project area. While the NRTR states that no plants were seen, the Service requires greater details of survey methodology before we can concur with the determination that the project will have no effect on rough-leaved loosestrife.

B-4024, Bridge No. 136 on SR 1626 over Pantego Creek, Beaufort County - The NRTR states (p. 3) that the average depth of Pantego Creek is 4.5 feet, but concludes (p. 14) that the necessary water depth for the manatee is not present. The Service disagrees and recommends that project plans should incorporate measures given in "Precautions for General Construction in Areas Which May Be Used by the West Indian Manatee in North Carolina" that the Service provided the NCDOT in 1996. Suitable habitat for sensitive jointvetch exists in the project area (p. 17), but the NRTR concludes that the project would have "no effect" on the species based, in part, on the fact that no plant were "found in the project area." The Service cannot concur with this determination. The Service will require additional surveys closer to the time of actual construction and greater details of survey methodology, including time of year and the intensity of the survey, before we can concur that the project will have no effect on the sensitive jointvetch.

B-4031, Bridge No. 72 on NC 179 over Jinnys Branch, Brunswick County - The NRTR states (p. 4) that water depths range from two to six feet, and concludes (p. 21) that "vagrant manatees visiting the lower Lumber river system would not be expected within the project area." The Service does concur with the biological conclusion of "no effect" on the manatee and requests that the project utilize the standard precautions for general construction in areas which may be used by manatees. The NRTR states that the biological conclusions for the bald eagle (*Haliaeetus leucocephalus*) and Federally endangered wood stork (*Mycteria americana*) are "unresolved." Wood storks may undertake post-breeding season dispersals from June through early autumn in search of food in swamps, marshes, and mudflats. The NCDOT should seek to determine whether the project area is used, if even on a temporary basis, by these species. If wood storks do feed in the project area during a limited portion of the year, the Service would recommend that this project be scheduled outside this particular period.

- B-4086, Bridge No. 10 on SR 1111 over Brices Creek, Craven County - With an average depth of three feet, Brices Creek is not likely to be used by manatees. The Service cannot concur with the determination that the project would have "no effect" on the sensitive jointvetch based on the lack of observation during site survey in 2001 and an absence of historical occurrence in the project area. The NRTR notes that suitable habitat for this species is present in the project area. The Service will require additional surveys closer to the time of actual construction and greater details of survey methodology, including time of year and the intensity of the survey, before we can concur that the project will have no effect on the sensitive jointvetch..
- B-4154, Bridge No. 108 on SR 1340 over Old State Canal, Hyde County - The NRTR notes that habitat for the sensitive jointvetch is present in the project area, but concludes that the project will have no impacts on the species, based in part, on a failure to find the species during surveys. The Service will require additional surveys closer to the time of actual construction and greater details of survey methodology, including time of year and the intensity of the survey, before we can concur that the project will have no effect on the sensitive jointvetch..
- B-4219, Bridge No. 65 on SR 1304 over an unnamed tributary to the Neuse River, Pamlico County - The tributary to be crossed has an average depth of approximately four feet and the NRTR notes (p. 15) that "marginal" habitat for the manatee exists in the project area. The Service does not concur with the biological conclusion of "no effect" for the manatee and recommends that future project documentation include commitments to follow procedures given in "Precautions for General Construction in Areas Which May Be Used by the West Indian Manatee in North Carolina."
- B- 4221 , Bridge No. 4 on SR 1344 over South Prong Bay River, Pamlico County - The NRTR (p. 3) notes that the average depth of the water to be bridged is approximately 3.5 feet and later concludes (p. 15) that the waterway is not deep enough or contain sufficient vegetation to provide habitat for the manatee. The Service cannot concur with the stated conclusion that "no impact to the West Indian manatee will result from project construction." We recommend that future project documentation include commitments to follow procedures given in "Precautions for General Construction in Areas Which May Be Used by the West Indian Manatee in North Carolina."
- B- 4223, Bridge No. 21 on NC 210 over the Northeast Cape Fear River, Pender County - The NRTR notes (p. 20) that manatees could occur in the project area and states that impacts to the species are "unresolved." The NRTR also recommends that a "follow-up survey" be conducted. A one time survey will not determine the presence of this species at a particular construction site. The species moves through North Carolina coastal waters on a seasonal basis. If there is any chance that the species could occur at a construction site, the Service's guidelines (USFWS 1996) should be incorporated into project plans.

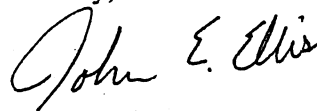
B-4234, Bridge No. 98 on SR 1407 over Conetoe Creek, Pitt County - As noted in the NRTR, surveys should be conducted for the Tar River spiny mussel (*Elliptio steinstansana*). The area surveyed should extend from 100 meters (328 feet) upstream to 300 meters (984 feet) downstream.

B-4235, Bridge No. 118 on SR 1538 over Grindel Creek, Pitt County - Survey for the Tar River spiny mussel will be required from 100 meters (328 feet) upstream to 300 meters (984 feet) downstream.

B-4272, Bridge No. 191 on SR 1845 over Great Coharie Creek, Sampson County - The NRTR concludes that the project would have "no effect" on pondberry (*Lindera melissifolia*) due to a lack of habitat in the project area. The two habitats mentioned are shallow ponds with sandy substrate and Carolina bays. This species is associated with wetland habitats such as bottomland and hardwoods in the interior areas, and the margins of sinks, ponds and other depressions in the more coastal sites. The plants generally grow in shaded areas but may also be found in full sun. Since the project area includes 0.5 acre of coastal plain bottomland hardwood forest, the Service requests that this area be surveyed for pondberry.

The Service appreciates the opportunity to comment on these projects. Please continue to advise us of the progression of the planning process, including your official determination of the impacts of this project. If you have any questions regarding these comments, please contact Howard Hall at 919-856-4520, ext. 27.

Sincerely,



for

Dr. Garland B. Pardue  
Ecological Services Supervisor

#### Attachment

#### Literature cited

- O'Shea, T. J. and M. E. Ludlow. 1992. Florida manatee. pp. 190-200. In S. R. Humphrey (ed.). Rare and Endangered Biota of Florida, Volume I. Mammals. University of Florida Press. Gainesville. 392 pp.
- U. S. Fish and Wildlife Service. 1996. Communication to the North Carolina Department of Transportation. USFWS, Raleigh Field Office. Raleigh, NC. 4 pp.



cc:

Ted Bisterfeld, U. S. Environmental Protection Agency, Atlanta, GA

Ron Sechler, NMFS, Beaufort, NC

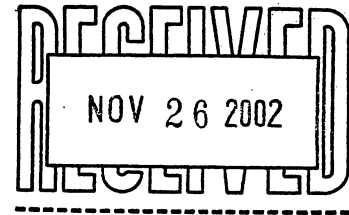
Michael Bell, U. S. Army Corps of Engineers, Washington Regulatory Field Office, Washington, NC

Eric Alsmeyer, U. S. Army Corps of Engineers, Raleigh Regulatory Field Office, Raleigh NC

David Timpy, U. S. Army Corps of Engineers, Wilmington Regulatory Field Office, Wilmington NC

John Hennessy, NC Division of Water Quality, Raleigh, NC

David Cox, NC Wildlife Resources Commission, Northside, NC



May 9, 2002

Regulatory Division

Action ID No. 200101169, 200101170, 200101171, 200101172, 200101174, 200101175, and 200200726.

Mr. William D. Gilmore, P.E., Manager  
Project Development & Environmental Analysis  
1548 Mail Service Center  
Raleigh, N.C. 27699-1548

Dear Mr. Gilmore:

Reference your letters February 18, 2002, March 1, 2002, March 18, 2002, and April 24, 2002 regarding our scoping comments on the following proposed bridge replacement projects:

1. TIP Project No. B-4268, Bridge No. 150 on SR 1006 over Little Coharie Creek, Sampson County, Action ID 200101169.
2. TIP Project No. B-4272, Bridge No. 191 on SR 1845 over Great Coharie Creek, Sampson County, Action ID 200101170.
3. TIP Project No. B-4031, Bridge No. 72 on NC 179 over Jinnys Branch, Brunswick County, Action ID 200101171.
4. TIP Project No. B-4223, Bridge No. 21 on NC 210 over NE Cape Fear River, Pender County, Action ID 200101172.
5. TIP Project No. B-4214, Bridge No. 24 on US 17 over New River, Onslow County, Action ID 200101174.
6. TIP Project No. B-4215, Bridge No. 19 on NC 210 over Stones Creek, Onslow County, Action ID 200101175.
7. TIP Project No. B-1382, Action ID 200200726, no information provided.

Based on the information provided for each project in the referenced letter (except TIP Project No. B-1382) and jurisdictional delineations conducted on October 9, 2001, it appears that each proposed bridge replacement project may impact jurisdictional wetlands. Department of the Army (DA) permit authorization, pursuant to Section 404 of the Clean Water Act of 1977, as amended, will be required for the discharge of excavated or fill material in waters of the United States or any adjacent wetlands in conjunction with these projects, including disposal of construction debris. Specific permit requirements will depend on design of the projects, extent of fill work within the waters of the United States,

including wetlands, construction methods, and other factors.

Although these projects may qualify as a Categorical Exclusion, to qualify for nationwide permit authorization under Nationwide Permit #23, the project planning report should contain sufficient information to document that the proposed activity does not have more than a minimal individual or cumulative impact on the aquatic environment. All activities, including temporary construction, access, and dewatering activities, should be included in the project planning report. Our experience has shown that replacing bridges with culverts often results in sufficient adverse impacts to consider the work as having more than minimal impacts on the aquatic environment. Accordingly, the following items need to be addressed in the project planning report:

a. The report should contain the amount of permanent and temporary impacts to waters and wetlands as well as a description of the type of habitat that will be affected by the proposed project.

b. Off-site detours are always preferable to on-site (temporary) detours in wetlands. If an on-site detour is the recommended action, justification should be provided that demonstrates that alternatives with lower wetland impacts are not practicable. On-site detours, unless constructed on a spanning structure or on a previous detour that was used in a past construction activity, can cause permanent wetland impacts due to sediment consolidation resulting from the on-site detour itself and associated heavy equipment. Substantial sediment consolidation in wetland systems may in turn cause fragmentation of the wetland and impair the ecological and hydrologic functions of the wetland. Thus, on-site detours constructed in wetlands can result in more than minimal wetland impacts. These types of wetland impacts will be considered as permanent wetland impacts. Please note that an onsite detour constructed on a spanning structure can potentially avoid permanent wetland impacts and should be considered whenever an on-site detour is the recommended action. For projects where a spanning structure is not feasible, the NCDOT should investigate the existence of previous onsite detours at the site that were used in previous construction activities. These areas should be utilized for onsite detours whenever possible to minimize wetland impacts.

For proposed projects and associated on-site detours that cause minimal losses of wetlands, an approved wetland restoration and monitoring plan will be required prior to issuance of a DA nationwide or Regional general permit. For proposed projects and associated on-site detours that cause significant wetland losses, an individual DA permit and a compensatory mitigation proposal for the unavoidable wetland impacts may be required.

In view of our concerns related to onsite detours constructed in wetlands, a cursory determination was made on the potential for sediment consolidation due to an onsite

detour at each of the proposed project sites. Based on these inspections, potential for sediment consolidation in wetlands exists at several of the proposed projects. Therefore, it is recommended that geotechnical evaluations be conducted at each project site to estimate the magnitude of sediment consolidation that can occur due to an on-site detour and the amount of undercutting that may be necessary. The results of this evaluation should be provided in the project planning report. Based on our field inspections, we strongly recommend that geotechnical evaluations be conducted at each of referenced proposed project sites. The following projects are considered as "red " projects as described in your letter of February 18, 2002.

1. TIP Project No. B-4268, Bridge No. 150 on SR 1006 over Little Coharie Creek, Sampson County, Action ID 200101169.
2. TIP Project No. B-4031, Bridge No. 72 on NC 179 over Jinnys Branch, Brunswick County, Action ID 200101171.

c. Project commitments should include the removal of all temporary fills from waters and wetlands and "time-of-year" restrictions on in-stream work if recommended by the NC Wildlife Resources Commission. In addition, if undercutting is necessary for temporary detours, the undercut material should be stockpiled on an upland site and later used to restore the site.

d. All restored areas should be planted with endemic vegetation including trees, if appropriate. For projects proposing a temporary onsite detour in wetlands, the entire detour area, including any previous detour from past construction activities, should be removed in its entirety.

e. The report should provide an estimate of the linear feet of new impacts to streams resulting from construction of the project.

f. If a bridge is proposed to be replaced with a culvert, NCDOT must demonstrate that the work will not result in more than minimal impacts on the aquatic environment, specifically addressing the passage of aquatic life including anadromous fish. The work must also not alter the stream hydraulics and create flooding of adjacent properties or result in unstable stream banks. In addition, the report should address the impacts that the culvert would have on recreational navigation.

g. The report should discuss and recommend bridge demolition methods and shall include the impacts of bridge demolition and debris removal in addition to the impacts of constructing the bridge. The report should also incorporate the bridge demolition policy recommendations pursuant to the NCDOT policy entitled "Bridge Demolition and Removal in Waters of the United States" dated September 20, 1999.

h. Lengthening existing bridges can often benefit the ecological and hydrological functions of the associated wetlands and streams. Most bridge approaches are connected to earthen causeways that were built over wetlands and streams. Replacing these causeways with longer bridges would allow previously impacted wetlands to be restored. In an effort to encourage this type of work, mitigation credit for wetland restoration activities can be provided to offset the added costs of lengthening an existing bridge. Of the referenced project sites, TIP Project No. 4031 connects to a 170 foot long causeway through coastal wetlands. It is recommended that this causeway be replaced with a bridge and associated wetland areas be restored.

i. Based on the information provided and the recent field investigations of the referenced project sites, the apparent level of wetland impacts and scope of the following projects warrant coordination pursuant to the integrated NEPA/Section 404-merger agreement:

1. TIP Project No. B-4268, Bridge No. 150 on SR 1006 over Little Coharie Creek, Sampson County, Action ID 200101169.
2. TIP Project No. B-4031, Bridge No. 72 on NC 179 over Jinnys Branch, Brunswick County, Action ID 200101171.

j. You have requested that the referenced projects be given a designation of "Red", "Green" or "Yellow" as explained in your letters. Projects designated as "Red" by our office are specified above. The remaining projects will be considered "yellow" projects. We believe that the "green" designation is misleading and should not be used.

Should you have any questions please call Mr. David L. Timpy at the Wilmington Field Office at 910-251-4634.

Sincerely,

E. David Franklin  
NCDOT Team Leader

Mr. Ron Sechler  
National Marine Fisheries Service  
Pivers Island

Beaufort, North Carolina 28516

Mr. John Dorney  
NCDENR-DWQ  
Wetlands Section  
1621 Mail Service Center  
Raleigh, NC 27699-1621

Mr. Doug Huggett  
North Carolina Division of  
Coastal Management  
1638 Mail Service Center  
Raleigh, North Carolina 27699-1638

Mr. David Cox  
Highway Coordinator  
North Carolina Wildlife Resources Commission  
1141 I-85 Service Road  
Creedmoor, North Carolina 27522

Mr. Howard Hall  
United States Fish & Wildlife Service  
Fish and Wildlife Enhancement  
Post Office Box 33726  
Raleigh, North Carolina 27636-3726

Mr. Allen Pope, PE  
North Carolina Department of Transportation  
Division 3  
124 Division Drive  
Wilmington, North Carolina 28401

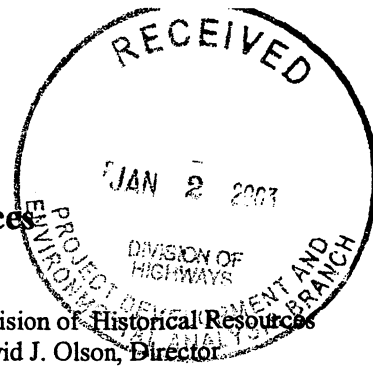
Ms. Kathy Matthews  
Wetlands Regulatory Section  
USEPA/EAB  
980 College Station Road  
Athens, GA 30605



North Carolina Department of Cultural Resources  
State Historic Preservation Office  
David L. S. Brook, Administrator

Michael F. Easley, Governor  
Lisbeth C. Evans, Secretary  
Jeffrey J. Crow, Deputy Secretary

Division of Historical Resources  
David J. Olson, Director



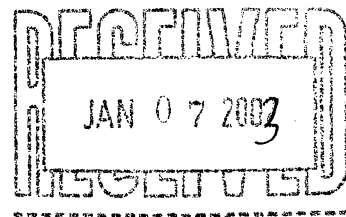
December 20, 2002

MEMORANDUM

TO: Greg Thorpe, Manager  
Project Development and Environmental Analysis Branch  
NCDOT Division of Highways

FROM: David Brook *for David Brook*

SUBJECT: Replacement of Bridge No. 19 over Stone Creek on NC 210, B-4215  
Onslow County, ER02-8582



Thank you for your letter of October 24, 2002, concerning the above project.

We have conducted a search of our maps and files and located the following structure of historical or architectural importance within the general area of this project:

Bridge No. 19

We recommend that a Department of Transportation architectural historian identify and evaluate any structures over fifty years of age within the project area, and report the findings to us.

There are no known archaeological sites within the proposed project area. Based on our knowledge of the area, it is unlikely that any archaeological resources that may be eligible for conclusion in the National Register of Historic Places will be affected by the project. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above-referenced tracking number.

DB:doc

cc: Mary Pope Furr  
Matt Wilkerson

	Location	Mailing Address	Telephone/Fax
Administration	507 N. Blount St, Raleigh, NC	4617 Mail Service Center, Raleigh 27699-4617	(919) 733-4763 • 733-8653
Restoration	515 N. Blount St, Raleigh, NC	4613 Mail Service Center, Raleigh 27699-4613	(919) 733-6547 • 715-4801
Survey & Planning	515 N. Blount St, Raleigh, NC	4618 Mail Service Center, Raleigh 27699-4618	(919) 733-4763 • 715-4801



North Carolina Department of Cultural Resources  
State Historic Preservation Office

David L. S. Brook, Administrator

Michael F. Easley, Governor  
Lisbeth C. Evans, Secretary  
Jeffrey J. Crow, Deputy Secretary  
Office of Archives and History

Division of Historical Resources  
David J. Olson, Director

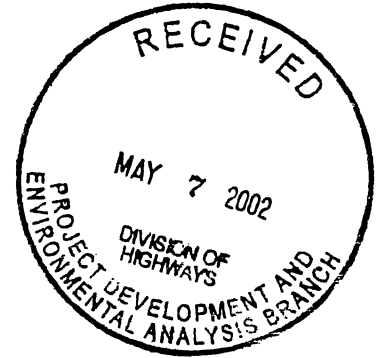
May 2, 2002

MEMORANDUM

TO: William D. Gilmore, Manager  
Project Development and Environmental Analysis Branch  
Division of Highways  
Department of Transportation

FROM: David Brook *for David Brook*

SUBJECT: Replace Bridge 19 on NC 19 over Stone Creek, B-4215, Onslow County, ER 02-8582



Thank you for your memorandum of September 25, 2001, concerning the above project.

Because the Department of Transportation is in the process of surveying and evaluating the National Register eligibility of all of its concrete bridges, we are unable to comment on the National Register eligibility of the subject bridge. Please contact Mary Pope Furr, in the Architectural History Section, to determine if further study of the bridge is needed.

There are no known archaeological sites within the project area. Based on our knowledge of the area, it is unlikely that any archaeological resources that may be eligible for conclusion in the National Register of Historic Places will be affected by the project. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above-referenced tracking number.

DB:kgc

cc: Mary Pope Furr, NCDOT

Administration  
Restoration  
Survey & Planning

Location  
507 N. Blount St. Raleigh, NC  
515 N. Blount St. Raleigh, NC  
515 N. Blount St. Raleigh, NC

Mailing Address  
4617 Mail Service Center, Raleigh 27699-4617  
4613 Mail Service Center, Raleigh 27699-4613  
4618 Mail Service Center, Raleigh 27699-4618

Telephone/Fax  
(919) 733-4763 • 733-8653  
(919) 733-6547 • 715-4801  
(919) 733-4763 • 715-4801



**CONCURRENCE FORM FOR PROPERTIES NOT ELIGIBLE FOR  
THE NATIONAL REGISTER OF HISTORIC PLACES**

*Project Description:* Replace Bridge No. 19 on NC 19 over Stone Creek

On 10/01/2002, representatives of the

- ☒ North Carolina Department of Transportation (NCDOT)  
☒ Federal Highway Administration (FHWA)  
☒ North Carolina State Historic Preservation Office (HPO)  
☐ Other

Reviewed the subject project at

- ☐ Scoping meeting  
☒ Historic architectural resources photograph review session/consultation  
☐ Other

All parties present agreed

- ☐ There are no properties over fifty years old within the project's area of potential effects.
- ☒ There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- ☒ There are properties over fifty years old within the project's Area of Potential Effects (APE), but based on the historical information available and the photographs of each property, the property identified as Bridge #19 is considered not eligible for the National Register and no further evaluation of it is necessary.
- ☒ There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- ☒ All properties greater than 50 years of age located in the APE have been considered at this consultation, and based upon the above concurrence, all compliance for historic architecture with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.
- ☒ There are no historic properties affected by this project. (Attach any notes or documents as needed)

Signed:

Mary Pope  
Representative, NCDOT

10-01-2002

Date

R. H. A.  
FHWA, for the Division Administrator, or other Federal Agency

10/1/02

Date

David Davis  
Representative, HPO

10-01-2002

Date

David Brook  
State Historic Preservation Officer

10/1/02

Date

If a survey report is prepared, a final copy of this form and the attached list will be included.



September 6, 2002

**Memorandum**

To: Mike Penney, NCDOT, Project Development & Environmental Analysis

From: John Hennessy *JH*

Subject: Scoping comments on the proposed bridge replacement of Bridge Number 19 on NC 210 over Stones Creek in Onslow County, TIP B-4215.

Reference your correspondence dated May 10, 2002 in which you requested comments for TIP project B-4215. Preliminary analysis of the project reveals the potential for impacts to an unnamed tributary to Stones Creek (DWQ Index No. 19-30-3, SA, HQW) in the White Oak River Basin and potential associated wetlands. Further investigations at a higher resolution should be undertaken to verify the presence of other streams and/or jurisdictional wetlands in the area. In the event that any jurisdictional areas are identified, the Division of Water Quality (DWQ) requests that NCDOT consider the following environmental issues for the proposed project:

- A. DWQ would prefer the new bridge design to minimize the number of bridge deck drains that discharge directly into surface waters. Please consider a stormwater collection that drains all stormwater to a stormwater treatment device. If such a design is not practical, then a design that minimizes direct discharge to surface waters through collection of some of the stormwater and discharging into a stormwater treatment device is preferred.
- B. If the old bridge is removed, no discharge of bridge material into surface waters is preferred. Strict adherence the Corps of Engineers guidelines for bridge demolition will be a condition of the 401 Water Quality Certification.
- C. The number of bridge bents placed in surface waters should be minimized.
- D. Use of jetting to install bridge bents is not preferred. Use of jetting for installation will need to be authorized in the 401 Water Quality Certification.
- E. The post-construction removal of any temporary bridge structures will need to return the project site to its preconstruction contours and elevations. The revegetation of the impacted areas with appropriate native species may also be necessary.
- F. The NCDOT will need to adhere to all appropriate in-water work moratoriums (including the use of pile driving or vibration techniques) prescribed by the NC Wildlife Resources Commission, the US Fish and Wildlife Service, and National Marine Fisheries Service.
- G. Any onsite detour will need to be constructed with a temporary bridge that spans all wetlands and surface waters. No fill into the adjacent surface waters or wetlands is preferred for the referenced project. Issuance of the 401 Water Quality Certification will likely be contingent on that condition being met.
- H. The NCDOT shall strictly adhere to sediment and erosion control Best Management Practices as described for High Quality Waters entitled "Design Standards in Sensitive Watersheds" (15A NCAC 04B .0024) throughout design and construction of the project.



- I. The project may require a State Stormwater permit issued by the NC Division of Water Quality. Please contact the appropriate regional office to ascertain its potential applicability.
- J. New stormwater draining from the proposed project cannot be discharged directly into SA waters. Rather, an infiltration basin designed according to the NC Division of Water Quality stormwater requirements may be required.
- K. The document should provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping.
- L. There should be a discussion on mitigation plans for unavoidable impacts. If mitigation is required, it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. While the NCDWQ realizes that this may not always be practical, it should be noted that for projects requiring mitigation, appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.
- M. Review of the project reveals that no hazardous spill catch basins will likely be required for this project.
- N. Wetland and stream impacts should be avoided (including sediment and erosion control structures/measures) to the maximum extent practical. If this is not possible, alternatives that minimize wetland impacts should be chosen. Mitigation for unavoidable impacts will be required by DWQ for impacts to wetlands in excess of one acre and/or to streams in excess of 150 linear feet.
- O. Borrow/waste areas should not be located in wetlands. It is likely that compensatory mitigation will be required if wetlands are impacted by waste or borrow.
- P. If foundation test borings are necessary; it should be noted in the document. Geotechnical work is approved under General 401 Certification Number 3027/Nationwide Permit No. 6 for Survey Activities.
- Q. In accordance with the NCDWQ Wetlands Rules { 15A NCAC 2H.0506(b)(6) }, mitigation will be required for impacts of greater than 150 linear feet to any single perennial stream. In the event that mitigation becomes required, the mitigation plan should be designed to replace appropriate lost functions and values. In accordance with the NCDWQ Wetlands Rules { 15A NCAC 2H.0506 (h)(3) }, the Wetland Restoration Program may be available for use as stream mitigation.
- R. Sediment and erosion control measures should not be placed in wetlands.
- S. While the use of National Wetland Inventory (NWI) maps, soil surveys, and other landscape scale analysis techniques are useful office tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.

Thank you for requesting our input at this time. The DOT is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact John Hennessy at (919) 733-5694.

cc: US Army Corps of Engineers Wilmington Field Office  
Howard Hall, USFWS  
David Cox, NCWRC  
Cathy Brittingham, NC Division of Coastal Management  
Personal Files  
File Copy

C:\ncdot\TIP B-4031\comments\B-4031 scoping comments.doc

54  
6-12-05  
**Subject: Bridge Replacement Projects CFY 2005**

**Date:** Tue, 28 May 2002 13:05:27 -0400

**From:** Bill Arrington <Bill.Arrington@ncmail.net>

**Organization:** NC DENR DCM

**To:** "William T. Goodwin" <bgoodwin@dot.state.nc.us>

**CC:** Cathy Brittingham <Cathy.Brittingham@ncmail.net>

CAMA

Mr. Goodwin,

I have visited each of the 14 bridge replacement sites included in your March 1, 2002 letter, located in the 20 Coastal counties under the jurisdiction of the Division of Coastal Management.

General comments regarding bridge replacement projects would include:

1. Existing access to coastal waters and land adjacent to coastal waters should be preserved. This would include trails, driveways, roads, boat ramps, clear channels, vertical clearance under bridges, parking spaces, etc.

2. The design of storm water diversion should add treatment prior to discharging. No storm water should be discharged to the waters and wetlands in coastal areas. Deck drains discharging to waters or wetlands should be eliminated from bridge replacements. Storm water collected from bridges and approaches should be disposed of by infiltration as far from the waters and wetlands as possible. The planning and design of these replacements is crucial to protecting the surrounding water quality. Bridges within one half mile of SA waters or ORW waters will need special attention dedicated to storm water collection, treatment and disposal.

3. Without specific proposals including accurate details of the proposed bridge replacement structures and associated impacts, comments included herein are general in nature and give no assurance of the ability to permit any bridge replacement proposal in these locations. Specific comments below are based on the assumption that the bridge replacements would be of the same general width, length and on the current alignment with no on site detour. Bridge replacements that vary from this would usually cause greater environmental impacts and require additional coordination with the resource agencies.

4. Any structure required to be built in wetlands or over the water to facilitate the construction of the bridge replacement or a detour around construction should be a temporary bridge.

Specific comments on the above referenced projects would include:

1. B-3611 in Beaufort County - RED LIGHT PROJECT - AEC's in the project area include CW, CS, PTW, and PTS. The potential for significant environmental impacts exists. Any project in this area will require a high level of coordination with all resource agencies. The existing bridge and causeway impacted the AEC's significantly and the potential for mitigation involving restoration and enhancement credits is great. ( including the abandoned roadbed to the west of the existing road)

2. B-4024 in Beaufort County - GREEN LIGHT PROJECT - AEC's in the project area include PTW and PTS. This project has the potential for minimal impacts.

3. B-4026 in Bertie County - DCM has no jurisdiction

4. B-4031 in Brunswick County - RED LIGHT PROJECT - AEC's in the

project area include CW, CS and PTW. Construction of the existing bridge has significantly impacted the AEC's. Restoration and enhancement mitigation potential is as great as the potential to adversely effect the AEC's.

5. B-4086 in Craven County - GREEN LIGHT PROJECT - AEC's in the project area include PTW and PTS. Parking area as in the northwest corner should be maintained.

6. B-4150 in Hertford County - YELLOW LIGHT PROJECT - AEC's in the project area include PTW and PTS. Parking and access to the road along the creek should be preserved.

7. B-4154 in Hyde County - DCM has no jurisdiction.

8. B-4214 in Onslow County - YELLOW LIGHT PROJECT - AEC's in the project area include PTW, PTS, CW, ES, EW. Wetlands surrounding this bridge should be protected as much as possible. Tidal wetlands in the northeast quadrant and wetlands in the Coastal Shoreline Buffer have the greatest significance. There exists a moderate potential for mitigation.

9. ~~██████████~~ in Onslow County - GREEN LIGHT PROJECT - AEC's in the project area include PTW and PTS. A moderate potential for mitigation may be possible with the lengthening of the bridge.

10. B-4219 in Pamlico County - RED LIGHT PROJECT - AEC's in project area include CW, CS, PTW, PTS and EW. The existing bridge has impacted the surrounding waters and wetlands. The inlet for this creek has closed in and only has water exchange at high tide. The bridge needs to be extended and the fill causeway removed. Great mitigation potential. Should preserve parking spaces for public access.

11. B-4221 in Pamlico County - GREEN LIGHT PROJECT - AEC's in project area include PTS and PTW. Access to farm roads in NW and SE quadrants should be preserved. A moderate potential for mitigation may exist with lengthening the bridge and removing causeway.

12. B-4223 in Pender County - YELLOW LIGHT PROJECT - AEC's in the project area include PTW and PTS. Any realignment or expansion of fill slopes should move to the south to avoid impacts to the access and business and residence on the north side of the bridge.

13. B-4227 in Perquimans County - GREEN LIGHT PROJECT - AEC's in the project area include PTW and PTS. Access adjacent to the bridge should be maintained.

14. B-4314 in Washington County- GREEN LIGHT PROJECT - AEC's in project area include PTW and PTS.

Thank you for providing DCM with the opportunity to comment on these projects in advance of their planning. Advance notification of environmental concerns should allow the design and permitting process to work more smoothly.

Thank you,

Bill



## North Carolina Wildlife Resources Commission

Charles R. Fullwood, Executive Director

TO: William T. Goodwin, Jr., PE, Unit Head  
Bridge Replacement & Environmental Analysis Branch

FROM: David Cox, Highway Project Coordinator  
Habitat Conservation Program *David Cox*

DATE: May 22, 2002

SUBJECT: NCDOT Bridge Replacements:  
Beaufort County – Bridge No. 77, NC 99, Pantego Creek, B-3611  
Beaufort County – Bridge No. 136, SR 1626, Canal, B-4024  
Bertie County – Bridge No. 45, SR 1110, Choowatic Creek, B-4026  
Brunswick County – Bridge No. 72, NC 179, Jinnys Branch, B-4031  
Chatham County – Bridge No. 142, SR 2170, Meadow Creek, B-4065  
Craven County – Bridge No. 10, SR 1111, Brices Creek, B-4086  
Cumberland County – Bridge No. 85, I-95 Business, Cape Fear River, B-4091  
Durham County – Bridge No. 5, SR 1616, Mountain Creek, B-4110  
Edgecombe County – Bridge No. 19, SR 1135, Cokey Swamp, B-4111  
Franklin County – Bridge No. 15, SR 1106, Little River, B-4113  
Granville County – Bridge No. 84, SR 1141, Tar River, B-4124  
Greene County – Bridge No. 46, SR 1091, Wheat Swamp Creek, B-4125  
Greene/Lenoir Cos. – Bridge No. 49, SR 1434, Wheat Swamp Creek, B-4126  
Greene County – Bridge No. 43, SR 1438, Rainbow Creek, B-4127  
Halifax County – Bridge No. 11, SR 1001, Jacket Swamp, B-4133  
Harnett County – Bridge No. 35, NC 42, Norfolk and Southern Railway, B-4137  
Hertford County – Bridge No. 67, SR 1118, Ahoskie Creek, B-4150  
Hyde County – Bridge No. 108, SR 1340, Old State Canal, B-4154  
Jones County – Bridge No. 7, SR 1129, Big Chinquapin Branch, B-4169  
Lee County – Bridge No. 4, SR 1423, Gum Fork, B-4171  
Martin County – Bridge No. 5, SR 1417, Conoho Creek, B-4187  
Nash County – Bridge No. 56, SR 1544, Tar River, B-4211  
Onslow County – Bridge No. 24, US 17, New River, B-4214  
Onslow County – Bridge No. 19, NC 210, Stones Creek, B-4215  
Pamlico County – Bridge No. 65, SR 1304, UT to Neuse River, B-4219  
Pamlico County – Bridge No. 4, SR 1344, South Prong Bay River, B-4221  
Perquimans County – Bridge No. 69, SR 1222, Mill Creek, B-4227  
Pitt County – Bridge No. 98, SR 1407, Conetoe Creek, B-4234  
Pitt County – Bridge No. 118, SR 1538, Grindle Creek, B-4235  
Randolph County – Bridge No. 34, SR 1304, Second Creek, B-4242

Randolph County – Bridge No. 257, SR 2824, Vestal Creek, B-4245  
Richmond County – Bridge No. 129, SR 1321, Big Mountain Creek, B-4247  
Sampson County – Bridge No. 150, SR 1006, Little Coharie Creek, B-4268  
Sampson County – Bridge No. 191, SR 1845, Great Coharie Creek, B-4272  
Vance County – Bridge No. 3, SR 1107, Ruin Creek, B-4298  
Wake County – Bridge No. 189, SR 2333, Little River, B-4305  
Washington County – Bridge No. 29, SR 1163, Maul Creek, B-4314  
Wilson County – Bridge No. 52, SR 1131, Turkey Creek, B-4327  
Wilson County – Bridge No. 3, SR 1634, Great Swamp, B- 4328

Biologists with the N. C. Wildlife Resources Commission (NCWRC) have reviewed the information provided and have the following preliminary comments on the subject project. Our comments are provided in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

Our standard recommendations for bridge replacement projects of this scope are as follows:

1. We generally prefer spanning structures. Spanning structures usually do not require work within the stream and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allows for human and wildlife passage beneath the structure, does not block fish passage, and does not block navigation by canoeists and boaters.
2. Bridge deck drains should not discharge directly into the stream.
3. Live concrete should not be allowed to contact the water in or entering into the stream.
4. If possible, bridge supports (bents) should not be placed in the stream.
5. If temporary access roads or detours are constructed, they should be removed back to original ground elevations immediately upon the completion of the project. Disturbed areas should be seeded or mulched to stabilize the soil and native tree species should be planted with a spacing of not more than 10'x10'. If possible, when using temporary structures the area should be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact, allows the area to revegetate naturally and minimizes disturbed soil.
6. A clear bank (riprap free) area of at least 10 feet should remain on each side of the stream underneath the bridge.
7. In trout waters, the N.C. Wildlife Resources Commission reviews all U.S. Army Corps of Engineers nationwide and general '404' permits. We have the option of requesting additional measures to protect trout and trout habitat and we can recommend that the project require an individual '404' permit.
8. In streams that contain threatened or endangered species, NCDOT biologist Mr. Tim Savidge should be notified. Special measures to protect these sensitive species may be required. NCDOT should also contact the U.S. Fish and Wildlife Service for information on requirements of the Endangered Species Act as it relates to the project.

9. In streams that are used by anadromous fish, the NCDOT official policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997)" should be followed.
10. In areas with significant fisheries for sunfish, seasonal exclusions may also be recommended.
11. Sedimentation and erosion control measures sufficient to protect aquatic resources must be implemented prior to any ground disturbing activities. Structures should be maintained regularly, especially following rainfall events.
12. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 15 days of ground disturbing activities to provide long-term erosion control.
13. All work in or adjacent to stream waters should be conducted in a dry work area. Sandbags, rock berms, cofferdams, or other diversion structures should be used where possible to prevent excavation in flowing water.
14. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams.
15. Only clean, sediment-free rock should be used as temporary fill (causeways), and should be removed without excessive disturbance of the natural stream bottom when construction is completed.
16. During subsurface investigations, equipment should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

If corrugated metal pipe arches, reinforced concrete pipes, or concrete box culverts are used:

1. The culvert must be designed to allow for aquatic life and fish passage. Generally, the culvert or pipe invert should be buried at least 1 foot below the natural streambed (measured from the natural thalweg depth). If multiple barrels are required, barrels other than the base flow barrel(s) should be placed on or near stream bankfull or floodplain bench elevation (similar to Lyonsfield design). These should be reconnected to floodplain benches as appropriate. This may be accomplished by utilizing sills on the upstream and downstream ends to restrict or divert flow to the base flow barrel(s). Silled barrels should be filled with sediment so as not to cause noxious or mosquito breeding conditions. Sufficient water depth should be provided in the base flow barrel(s) during low flows to accommodate fish movement. If culverts are longer than 40-50 linear feet, alternating or notched baffles should be installed in a manner that mimics existing stream pattern. This should enhance aquatic life passage: 1) by depositing sediments in the barrel, 2) by maintaining channel depth and flow regimes, and 3) by providing resting places for fish and other aquatic organisms. In essence, base flow barrel(s) should provide a continuum of water depth and channel width without substantial modifications of velocity.



2. If multiple pipes or cells are used, at least one pipe or box should be designed to remain dry during normal flows to allow for wildlife passage.
3. Culverts or pipes should be situated along the existing channel alignment whenever possible to avoid channel realignment. Widening the stream channel must be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
4. Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be professionally designed, sized, and installed.

In most cases, we prefer the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure should be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed down to the natural ground elevation. The area should be stabilized with grass and planted with native tree species. If the area reclaimed was previously wetlands, NCDOT should restore the area to wetlands. If successful, the site may be utilized as mitigation for the subject project or other projects in the watershed.

Project specific comments:

1. Beaufort County – Bridge No. 77, NC 99, Pantego Creek, B-3611  
YELLOW LIGHT. Biologists indicate that a bridge is preferred. There is potential for wetland impacts at this location due to the width of stream and site elevation. Due to the potential for anadromous fish at this location, NCDOT should closely follow the “Stream Crossing Guidelines for Anadromous Fish Passage”. This includes a moratorium on work within jurisdictional waters from February 15 to June 15.
2. Beaufort County – Bridge No. 136, SR 1626, Canal, B-4024  
GREEN LIGHT. No concerns indicated by biologists. Standard conditions should be appropriate.
3. Beaufort County – Bridge No. 136, SR 1626, Canal, B-4024  
GREEN LIGHT. No concerns indicated by biologists. Standard conditions should be appropriate.
4. Bertie County – Bridge No. 45, SR 1110, Choowatic Creek, B-4026  
YELLOW LIGHT. Due to the potential for anadromous fish at this location, NCDOT should closely follow the “Stream Crossing Guidelines for Anadromous Fish Passage”. This includes a moratorium on work within jurisdictional waters from February 15 to June 15.
5. Brunswick County – Bridge No. 72, NC 179, Jinnys Branch, B-4031  
YELLOW LIGHT. Due to the potential for anadromous fish at this location, NCDOT should closely follow the “Stream Crossing Guidelines for Anadromous Fish Passage”. This includes a moratorium on work within jurisdictional waters from February 15 to June 15. There is also the potential for impacts to high quality coastal wetlands at this location. NCDOT should employ all measures necessary to avoid impacts to these resources.

6. Chatham County – Bridge No. 142, SR 2170, Meadow Creek, B-4065

YELLOW LIGHT. If aquatic surveys indicate the potential for impacts to the Cape Fear Shiner, NCDOT should contact USFWS and NCWRC biologists for an on-site meeting to discuss special measures to reduce potential adverse effects. Standard recommendations apply.

7. Craven County – Bridge No. 10, SR 1111, Brices Creek, B-4086

YELLOW LIGHT. Due to the potential for anadromous fish at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes a moratorium on work within jurisdictional waters from February 15 to June 15. Biologists indicate that a bridge is preferred. There is also the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Other standard recommendations apply.

8. Cumberland County – Bridge No. 85, I-95 Business, Cape Fear River, B-4091

YELLOW LIGHT. Due to the potential for anadromous fish at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes a moratorium on work within jurisdictional waters from February 15 to June 15. Other standard recommendations apply.

9. Durham County – Bridge No. 5, SR 1616, Mountain Creek, B-4110

YELLOW LIGHT. Due to the DWQ water quality classification, we recommend High Quality Sedimentation and Erosion Control Measures be used. Other standard recommendations apply.

10. Edgecombe County – Bridge No. 19, SR 1135, Cokey Swamp, B-4111

YELLOW LIGHT. If aquatic surveys indicate the potential for impacts to listed mussels, NCDOT should contact USFWS and NCWRC biologists for an on-site meeting to discuss special measures to reduce potential adverse effects. Standard recommendations apply.

11. Franklin County – Bridge No. 15, SR 1106, Little River, B-4113

RED LIGHT. Due to the potential for anadromous fish at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes a moratorium on work within jurisdictional waters from February 15 to June 15. There are records of state and federally listed mussels in the project vicinity. Therefore, due to the potential for impacts to listed species we request that NCDOT perform a mussel survey prior to the construction of this bridge. An on-site meeting should be held with NCWRC and USFWS biologists, prior to the '404' permit application, to discuss bridge design and construction. We request NCDOT incorporate High Quality Sedimentation and Erosion Control Measures into the design of this project. Other standard recommendations apply.

12. Granville County – Bridge No. 84, SR 1141, Tar River, B-4124

RED LIGHT. The Tar River supports a good fishery for sunfish, therefore, we recommend a moratorium on work within jurisdictional waters from April 1 to June 15. There are records of state and federally listed mussels in the project vicinity. Therefore, due to the potential for impacts to listed species we request that NCDOT perform a mussel survey prior to the construction of this bridge. An on-site meeting should be held with NCWRC and USFWS biologists, prior to the '404' permit application, to discuss bridge design and construction. We request NCDOT incorporate High Quality Sedimentation and Erosion Control Measures into the design of this project. Other standard recommendations apply.

\* 13. Greene County – Bridge No. 46, SR 1091, Wheat Swamp Creek, B-4125  
YELLOW LIGHT. There is the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Standard recommendations apply.

14. Greene/Lenoir Cos. – Bridge No. 49, SR 1434, Wheat Swamp Creek, B-4126  
YELLOW LIGHT. There is the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Standard recommendations apply.

15. Greene County – Bridge No. 43, SR 1438, Rainbow Creek, B-4127  
YELLOW LIGHT. There is the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Standard recommendations apply.

16. Halifax County – Bridge No. 11, SR 1001, Jacket Swamp, B-4133  
YELLOW LIGHT. If aquatic surveys indicate the potential for impacts to listed mussels, NCDOT should contact USFWS and NCWRC biologists for an on-site meeting to discuss special measures to reduce potential adverse effects. Standard recommendations apply.

17. Harnett County – Bridge No. 35, NC 42, Norfolk and Southern Railway, B-4137  
GREEN LIGHT. No comment.

18. Hertford County – Bridge No. 67, SR 1118, Ahoskie Creek, B-4150  
YELLOW LIGHT. Due to the potential for anadromous fish at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes a moratorium on work within jurisdictional waters from February 15 to June 15. Other standard comments apply.

19. Hyde County – Bridge No. 108, SR 1340, Old State Canal, B-4154  
GREEN LIGHT. Standard comments apply.

20. Jones County – Bridge No. 7, SR 1129, Big Chinquapin Branch, B-4169  
YELLOW LIGHT. Big Chinquapin Branch supports a good fishery for sunfish; therefore, we recommend a moratorium on work within jurisdictional waters from April 1 to June 15. There is also the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Other standard recommendations apply.

21. Lee County – Bridge No. 4, SR 1423, Gum Fork, B-4171  
GREEN LIGHT. Standard comments apply.

22. Martin County – Bridge No. 5, SR 1417, Conoho Creek, B-4187  
YELLOW LIGHT. Due to the potential for anadromous fish at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes a moratorium on work within jurisdictional waters from February 15 to June 15. Biologists indicate that a bridge is preferred. There is also the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Other standard comments apply.

23. Nash County – Bridge No. 56, SR 1544, Tar River, B-4211

YELLOW LIGHT. The Tar River supports a good fishery for sunfish; therefore, we recommend a moratorium on work within jurisdictional waters from April 1 to June 15. If aquatic surveys indicate the potential for impacts to listed mussels, NCDOT should contact USFWS and NCWRC biologists for an on-site meeting to discuss special measures to reduce potential adverse effects. Other standard recommendations apply.

24. Onslow County – Bridge No. 24, US 17, New River, B-4214

YELLOW LIGHT. The New River is designated as a Primary Nursery Area on the downstream side of the existing US 17 bridge. Due to the potential for adult and larval stages of anadromous fish at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes a moratorium on work within jurisdictional waters from February 15 to September 30. Other standard recommendations apply.

25. Onslow County – Bridge No. 19, NC 210, Stones Creek, ~~B-4215~~

YELLOW LIGHT. Due to the potential for anadromous fish at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes a moratorium on work within jurisdictional waters from February 15 to June 15. Biologists indicate that a bridge is preferred. There is also the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Other standard comments apply.

26. Pamlico County – Bridge No. 65, SR 1304, UT to Neuse River, B-4219

YELLOW LIGHT. There is the potential for impacts to high quality coastal wetlands at this location. NCDOT should employ all measures necessary to avoid impacts to these resources. Other standard comments apply.

27. Pamlico County – Bridge No. 4, SR 1344, South Prong Bay River, B-4221

YELLOW LIGHT. There is the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Other standard comments apply.

28. Pender County – Bridge No. 21, NC 210, NE Cape Fear River, B-4223

RED LIGHT. There are records of the federally listed Shortnose sturgeon in the NE Cape Fear in the project area. Due to the potential for anadromous fish and Shortnose sturgeon at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes a moratorium on work within jurisdictional waters from February 1 to June 15. Biologists indicate that a bridge is preferred. There is also the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Other standard comments apply.

29. Perquimans County – Bridge No. 69, SR 1222, UT to Mill Creek, B-4227

YELLOW LIGHT. Due to the potential for anadromous fish at this location, NCDOT should closely follow the "Stream Crossing Guidelines for Anadromous Fish Passage". This includes a moratorium on work within jurisdictional waters from February 15 to June 15. There is also the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Other standard comments apply.

30. Pitt County – Bridge No. 98, SR 1407, Conetoe Creek, B-4234

GREEN LIGHT. Standard comments apply.

31. Pitt County – Bridge No. 118, SR 1538, Grindle Creek, B-4235

YELLOW LIGHT. If aquatic surveys indicate the potential for impacts to listed mussels, NCDOT should contact USFWS and NCWRC biologists for an on-site meeting to discuss special measures to reduce potential adverse effects. There is also the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Other standard comments apply.

32. Randolph County – Bridge No. 34, SR 1304, Second Creek, B-4242

GREEN LIGHT. Standard comments apply.

33. Randolph County – Bridge No. 257, SR 2824, Vestal Creek, B-4245

YELLOW LIGHT. If aquatic surveys indicate the potential for impacts to listed mussels, NCDOT should contact USFWS and NCWRC biologists for an on-site meeting to discuss special measures to reduce potential adverse effects. Other standard comments apply.

34. Richmond County – Bridge No. 129, SR 1321, Big Mountain Creek, B-4247

YELLOW LIGHT. If aquatic surveys indicate the potential for impacts to listed mussels, NCDOT should contact USFWS and NCWRC biologists for an on-site meeting to discuss special measures to reduce potential adverse effects. Other standard comments apply.

35. Sampson County – Bridge No. 150, SR 1006, Little Coharie Creek, B-4268

YELLOW LIGHT. Little Coharie Creek supports a good fishery for sunfish; therefore, we recommend a moratorium on work within jurisdictional waters from April 1 to June 15. There is also the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Other standard comments apply.

36. Sampson County – Bridge No. 191, SR 1845, Great Coharie Creek, B-4272

YELLOW LIGHT. Great Coharie Creek supports a good fishery for sunfish; therefore, we recommend a moratorium on work within jurisdictional waters from April 1 to June 15. Biologists indicate that a bridge is preferred. There is also the potential for impacts to high quality wetlands at this site. NCDOT should avoid or minimize impacts to these wetlands. Other standard comments apply.

37. Vance County – Bridge No. 3, SR 1107, Ruin Creek, B-4298

RED LIGHT. There are records of state and federally listed mussels in the project vicinity. Therefore, due to the potential for impacts to listed species we request that NCDOT perform a mussel survey prior to the construction of this bridge. An on-site meeting should be held with NCWRC and USFWS biologists, prior to the '404' permit application, to discuss bridge design and construction. We request NCDOT incorporate High Quality Sedimentation and Erosion Control Measures into the design of this project. Other standard recommendations apply.

38. Wake County – Bridge No. 189, SR 2333, Little River, B-4305

RED LIGHT. The Little River supports a good fishery for sunfish, therefore, we recommend a moratorium on work within jurisdictional waters from April 1 to June 15. There are records of state and federally listed mussels in the project vicinity. Therefore, due to the potential for impacts to listed species we request that NCDOT perform a mussel survey prior to the construction of this bridge. An on-site meeting should be held with NCWRC and USFWS biologists, prior to the '404' permit application, to discuss bridge design and construction. We request NCDOT incorporate High Quality Sedimentation and Erosion Control Measures into the design of this project. Other standard recommendations apply.

39. Washington County – Bridge No. 29, SR 1163, Maul Creek, B-4314  
GREEN LIGHT. Standard comments apply.

40. Wilson County – Bridge No. 52, SR 1131, Turkey Creek, B-4327  
RED LIGHT. Turkey Creek supports a good fishery for sunfish, therefore, we recommend a moratorium on work within jurisdictional waters from April 1 to June 15. There are records of state and federally listed mussels in the project vicinity. Therefore, due to the potential for impacts to listed species we request that NCDOT perform a mussel survey prior to the construction of this bridge. An on-site meeting should be held with NCWRC and USFWS biologists, prior to the '404' permit application, to discuss bridge design and construction. We request NCDOT incorporate High Quality Sedimentation and Erosion Control Measures into the design of this project. Other standard recommendations apply.

41. Wilson County – Bridge No. 3, SR 1634, Great Swamp, B- 4328  
YELLOW LIGHT. If aquatic surveys indicate the potential for impacts to listed mussels, NCDOT should contact USFWS and NCWRC biologists for an on-site meeting to discuss special measures to reduce potential adverse effects. Other standard recommendations apply.

NCDOT should routinely minimize adverse impacts to fish and wildlife resources in the vicinity of bridge replacements. Restoring previously disturbed floodplain benches should narrow and deepen streams previously widened and shallowed during initial bridge installation. NCDOT should install and maintain sedimentation control measures throughout the life of the project and prevent wet concrete from contacting water in or entering into these streams. Replacement of bridges with spanning structures of some type, as opposed to pipe or box culverts, is recommended in most cases. Spanning structures allow wildlife passage along streambanks and reduce habitat fragmentation.

If you need further assistance or information on NCWRC concerns regarding bridge replacements, please contact me at (336) 769-9453. Thank you for the opportunity to review and comment on these projects.

cc: USFWS, Raleigh

# Onslow County Schools

Superintendent  
Ronald B. Singletary

Deputy Superintendent  
Freddie S. Canady

Asst. Superintendents  
Jeffrey L. Hudson  
Barbara B. Newman

P.O. Box 99, Jacksonville, North Carolina 28541-0099  
Phone (910) 455-2211 FAX (910) 455-1965

Board of Education  
Robert B. Gaskins, Chm.  
Boyd Tisdale, V.Chm.  
Margaret E. Brown  
Lina Padgett-Parker  
Brock Ridge  
Ronnie Ross  
Mary Ann Sharpe

June 11, 2003

Mr. Elmo Vance  
North Carolina Department of Transportation  
Project Development and Environmental Analysis Branch  
1548 Mail Service Center  
Raleigh, NC 27699-1548

REF: TIP Project Number B-3851  
Project 8.1262101: Replacement of Bridge No.19 on NC 210 over Stones Creek

Dear Mr. Vance:

Thank you for your notice of a citizen's informational workshop. We have carefully evaluated the impact of traffic rerouting necessitated by the above reference project. Using our state-approved Transportation Information Management System (TIMS), our staff have determined that Alternative A (replacing the bridge in-place with an off-site detour) will add significant costs to our transportation system.

Please see the attached memorandum dated June 9, 2003 from Ms. Barbara Justice-Rooks, TIMS Coordinator. The costs of this detour route shall add approximately \$10,632 per month to our system for each month the detour is in effect. During an anticipated austere budget year, this will be an unbearable burden to our system. In addition, a detour shall unnecessarily lengthen the travel times of a great number of students within our system.

I strongly urge you to consider Alternative B for rerouting traffic. This would replace the bridge in-place with an on-site detour located northeast of the existing structure. Thank you for your consideration of this request. If you have any questions, please do not hesitate to call.

Sincerely,



Jeffrey L. Hudson  
Assistant Superintendent

Attachments (2)

CC: Senator Cecil S. Hargett, Jr.  
Representative Jean R. Preston  
Representative Keith P. Williams  
Representative W. Robert Grady  
Lanny Wilson, Board of Transportation Member  
Louis Sewell, Board of Transportation Member  
Dr. Ronald B. Singletary, Superintendent of Schools  
Mr. Jeff Smith, OCS Transportation Director  
Ms. Barbara Justice-Rooks, OCS TIMS Coordinator

# Memorandum

**To:** Jeff Hudson, Assistant Superintendent

Jeff Smith, Transportation Director

**From:** Barbara Justice-Rooks, TIMS Coordinator

**Date:** 6/9/2003

**Re:** Bridge Replacement - Bridge #19 over Stones Creek (Hwy 210)

---

The options that will be presented at the public workshop are 1) a detour down Hwy 172 from Wilmington hwy, and 2) an onsite detour relatively close to the existing bridge. The latter will have little effect on school transportation. The first option will have an adverse affect on school transportation. Based on the 2002-2003 school year there were 62 regular bus trips over this bridge daily.

This included: Dixon Elementary -20 trips

Dixon middle/high -24 trips

New Bridge Middle -8 trips

Exceptional Children -16 trips

A detour down hwy 172 will amount to an increase in mileage of 354.4 miles per day at an increase in cost of \$531.60 per day, \$2,658.00 per week, or \$10,632.00 per month.



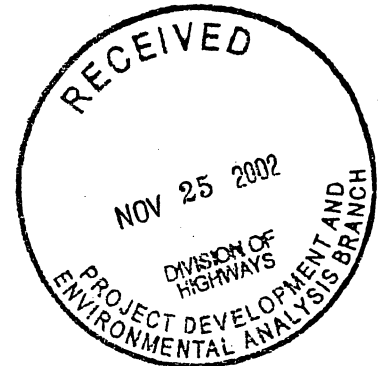
*County Commissioners*  
Delma Collins, Chairman  
W. C. Jarman, Vice Chairman  
Jack Bright  
Fred Holt  
Joseph R. McLaughlin



*County Administration*  
Ronald B. Lewis, County Manager

## COUNTY OF ONSLOW

November 20, 2002



Dr. Gregory J. Thorpe  
Environmental Management Director  
Project Development and Environmental Analysis  
NC Department of Transportation  
1548 Mail Service Center  
Raleigh, NC 27699-1548

Dear Dr. Thorpe:

Thank you for your letter dated October 24 in which you request our input, by November 29, on certain construction projects pending for Onslow County. It goes without saying that both projects mentioned, B-4214 and B-4215, are needed to improve the quality of our roads.

Project B-4215, the replacement of Bridge No. 19 over Stone Creek on NC 210, is desperately needed. This highway is well traveled daily and the residents are aware of the need for this improvement. It appears this work would produce no obvious adverse impact to the flow of traffic in this area. On the contrary, the replacement of this bridge can only serve to improve travel on Hwy NC 210.

On the other hand, replacing the Hwy 17 Bridge over the New River, one of our highest priorities, will not be accomplished quite so easily. I realize the hardships this will place on our travelers, as the Hwy 17 Bridge provides the primary river crossing between North and South Onslow County. The only apparent course would seem to be to redirect traffic during this replacement, and would involve detouring vehicles to the Old Bridge Street area of downtown Jacksonville.

This rerouting would funnel four lanes of 45 mile per hour traffic from Hwy 17 into a two-lane street that has a speed limit of 20 miles per hour, and has a high volume of pedestrian traffic in the area of the courthouses. There have been occasions where an accident on Hwy 17 resulted in the rerouting of traffic to Old Bridge Street for just a short time. My office is on Old Bridge Street and I have viewed first-hand the congestion this creates. It is untenable to think this narrow street could withstand such use on a daily basis.

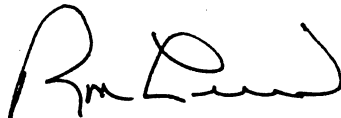
Dr. Gregory J. Thorpe  
November 20, 2002  
Page Two

There does seem to be an alternative to take. The north-bound lane could be closed during replacement and the south-bound lane diverted to two-way traffic. The reverse would be done upon completion of the first phase of the replacement. This type of traffic pattern was accomplished successfully during the replacement of the bridges crossing the White Oak River on Hwy 24 at Swansboro.

The replacement of these bridges is of vital importance and Onslow County fully supports the projects, and urges you to give informed thought to rerouting traffic in the Hwy 17 Bridge area.

I appreciate the opportunity to comment on the impact these projects will have, and trust that you will take the interest of our residents into consideration as you plan for the commencement of these projects.

Sincerely,



Ronald B. Lewis  
County Manager

mmr

C: Onslow County Board of Commissioners  
Bill Price, Planning Director

**County Commissioners**  
Delma G. Collins, Chairman  
W. C. Jarman, Vice Chairman  
Jack T. Bright  
Fred A. Holt  
Joseph R. McLaughlin



Department of Emergency Services  
Division of Emergency Medical Services  
*Thomas E. Thompson, Division Head*  
*Steven M. Conrad, Deputy Division Head*  
*Judith A. Costa, Captain*  
*Beth R. Himes, Captain*  
*Deborah A. Jones, Captain*  
*Roderick R. Williams, II, Captain*

## COUNTY OF ONSLOW

January 31, 2002

Davis Moore  
NC Department of Transportation  
Project Development and Environmental Analysis  
1548 Mail Service Center  
Raleigh, NC 27699-1548

Dear Mr. Moore,

There are several concerns that our Emergency Medical Service and Fire Service have addressed concerning renovation / restoration / re-construction of bridges in Onslow County. We will try to address all our concerns in such a manner that can be applied to all future bridge construction projects. You or your staff will be able to address these concerns on a perpetual basis concerning Emergency Response considerations for all future bridge construction in Onslow County. Our major concerns are as follow:

1. Highway 210 bridge in Sneads Ferry - B-4215

The bridge will affect four (4) Fire Departments, (1) Rescue Squad, and (2) EMS Stations that cover approximately 100 square miles of Onslow County. In some cases fire, rescue, and EMS units may have to divert nearly fourteen miles around the construction site. Time is critical when a life-threatening emergency arises. It is during these times that road access becomes a major life safety consideration.


- a. Will the highway be completely impassible at any given time?
- b. What are the expected traffic delays?
- c. When known access has been discontinued for more than a reasonable amount of time, will the Department of Transportation notify Emergency 911 Dispatchers of the situation?
- d. Construction on highway 210 could involve disruption of emergency access to three schools. Two at highway 17, from the Sneads Ferry side, and another closer to highway 172, which could be affected from the highway 17 direction.
- e. Will the bridge construction require disruption of the water system. Water mains travel either side of highway 210. Water pressure is important to providing fire protection at schools, local business', and residential property.

- f. We are already experiencing some delays with bridges under construction in two locations; Piney Green road and the bridge leading from Swansboro; into Carteret County on Highway 24 East. Arrangements have been made to contact the person in charge at Swansboro bridge, (Gary Butters 252-241-1945) to pass along Information relating to traffic control guards, concerning approach of emergency vehicles.
- g. Another area of concern with construction of the bridge on Highway 210 involves the school located near the 172 end, at four corners in Sneads Ferry. This school serves as a citizen shelter during hurricane season and construction could cause some unique problems during that time. Relocating a hurricane shelter can have a number of repercussions since shelters must meet specific guidelines, are selected by multi-agency consideration, and are documented as shelters at the State Emergency Management level.

2. New River Bridge on Highway 17S – Downtown Jacksonville – B-4214

- a. If, as you suggest in your letter dated August 7, 2001, the road was closed to traffic...the situation could become life threatening due to the extreme traffic congestion and lack of safe zones available, that would allow traffic to yield emergency vehicles.
  - b. In addition, it is questionable if the narrow city streets of downtown Jacksonville, which encompass several traffic lights and sharp turns, could handle a re-route of four lanes of traffic; reduced to one.
  - c. Commercial traffic could increase the potential danger of a tanker truck accident with product release in the heart of city / county government.
3. In closing, we are a county organization and have addressed these concerns from a County Emergency Response perspective. We can and have addressed the Medical Response concerns, both City and County. We feel that a similar opportunity should be afforded to the Onslow County Sheriff's Department, Jacksonville Police and Fire Departments. County Fire Department jurisdictions are all located outside the City of Jacksonville.

Thank you for this opportunity. Our Fire and Medical Chief's and Supervisors consider it very important for us to be aware of any situation that could delay or deny a timely response to our citizens during any fire or medical emergency. If you have any further questions, feel free to call this office, the Fire Marshal's Office (910-347-4270), or the Director of Emergency Services, at the same number.

  
Emergency Medical Service

  
County Fire Marshal

B-4215

Onslow County Schools Transportation

July 10, 2001

Davis Moore  
NC Department of Transportation

Dear Mr. Moore:

In response to your request, there are approximately 42 bus crossings over bridge No. 19 over Stone Creek, daily. This is likely to increase by 2005. In this area, any detour in effect for an extended amount of time, will result in a significant increase in transportation cost, for both mileage and driver salary, above our projected costs. Please advise us as soon as possible of the length of time the bridge will be closed and possible dates. An ideal situation for school transportation would be during summer break. Thank you for your consideration.

Sincerely,



Barbara Justice-Rooks

Barbara Justice-Rooks  
T.I.M.S. Coordinator

WA  
Wet

DATA FORM  
ROUTINE WETLAND DETERMINATION  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Bridge No. 4215 - Stones Creek</u>	Date: <u>8/27/01</u>
Applicant/Owner: <u>NCDOT</u>	County: <u>Onslow</u>
Investigator: <u>ESI</u>	State: <u>NC</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Hardwood</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>WA-3</u>
Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No	Plot ID: <u>Wet</u>
(If needed, explain on reverse)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Carpinus caroliniana</u>	<u>T</u>	<u>FAC</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. <u>Acer rubrum</u>	<u>S</u>	<u>FAC</u>	11. _____	_____	_____
4. <u>Carpinus caroliniana</u>	<u>S</u>	<u>FAC</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. <u>Arundinaria gigantea</u>	<u>H</u>	<u>FACW</u>	14. _____	_____	_____
7. <u>Boehmeria cylindrica</u>	<u>H</u>	<u>FACW+</u>	15. _____	_____	_____
8. <u>Anisacoma triphyllum</u>	<u>H</u>	<u>FACW-</u>	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-) 6/6 = 100%

Remarks:  
Wetland in bottomland hardwood flood plain

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Stream, Lake or Tide Gauge _____</p> <p>Aerial Photographs _____</p> <p>Other _____</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>Inundated _____</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 Inches</p> <p>Water Marks _____</p> <p>Drift Lines _____</p> <p>Sediment Deposits _____</p> <p>Drainage Patterns in Wetlands _____</p> <p>Secondary Indicators (2 or more required):</p> <p>Oxidized Root Channels in Upper 12 Inches _____</p> <p><input checked="" type="checkbox"/> Water-Stained Leaves</p> <p>Local Soil Survey Data _____</p> <p>FAC-Neutral Test _____</p> <p>Other (Explain in Remarks) _____</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>718</u> (in.)</p> <p>Depth to Saturated Soil: <u>7</u> (in.)</p>	
Remarks:	

# SOILS

Map Unit Name (Series and Phase): <u>Muckalee loam</u>		Drainage Class: <u>Poonly</u>	
Taxonomy (Subgroup): <u>Typic Fluvaquents</u>		Field Observations Confirm Mapped Type: Yes <input type="radio"/> No <input checked="" type="radio"/>	

**Profile Description:**

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-6		10YR 2/1	—	—	Sandy loam
6-18+		2.5Y 3/1	10YR 4/6	common, distinct	loamy sand

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
--	--

Remarks:  
Hydric soils present

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No (Circle) Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No (Circle)
Remarks:	

Approved by HQUSACE 2/92

WA  
Up

DATA FORM  
ROUTINE WETLAND DETERMINATION  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Bridge No. 4215 - Stones Creek</u>	Date: <u>8/27/01</u>
Applicant/Owner: <u>NC DOT</u>	County: <u>Onslow</u>
Investigator: <u>ESI</u>	State: <u>NC</u>
Do Normal Circumstances exist on the site? <u>Yes</u> <u>No</u>	Community ID: <u>Hardwood</u>
Is the site significantly disturbed (Atypical Situation)? <u>Yes</u> <u>No</u>	Transect ID: <u>WA-3</u>
Is the area a potential Problem Area? <u>Yes</u> <u>No</u>	Plot ID: <u>Upland</u>
(If needed, explain on reverse)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Carpinus caroliniana</u>	<u>T</u>	<u>FAC</u>	9. <u>Toxicodendron radicans</u>	<u>V</u>	<u>FAC</u>
2. _____	_____	_____	10. _____	_____	_____
3. <u>Quercus laurifolia</u>	<u>S</u>	<u>FACW</u>	11. _____	_____	_____
4. <u>Aesculus pavia</u>	<u>S</u>	<u>FAC</u>	12. _____	_____	_____
5. <u>Carya sp.</u>	<u>S</u>	<u>-</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. <u>Arundinaria gigantea</u>	<u>H</u>	<u>FACW</u>	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-) <u>5/5 = 100%</u>					
Remarks: <u>Else at bottomland hardwood</u>					

HYDROLOGY

<u>Recorded Data (Describe in Remarks):</u> <u>Stream, Lake or Tide Gauge</u> <u>Aerial Photographs</u> <u>Other</u> <input checked="" type="checkbox"/> <u>No Recorded Data Available</u>	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> <u>Inundated</u> <input type="checkbox"/> <u>Saturated in Upper 12 Inches</u> <input type="checkbox"/> <u>Water Marks</u> <input type="checkbox"/> <u>Drift Lines</u> <input type="checkbox"/> <u>Sediment Deposits</u> <input type="checkbox"/> <u>Drainage Patterns in Wetlands</u> <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> <u>Oxidized Root Channels in Upper 12 Inches</u> <input type="checkbox"/> <u>Water-Stained Leaves</u> <input type="checkbox"/> <u>Local Soil Survey Data</u> <input type="checkbox"/> <u>FAC-Neutral Test</u> <input type="checkbox"/> <u>Other (Explain in Remarks)</u>
<b>Field Observations:</b> Depth of Surface Water: <u>0</u> (in.) Depth to Free Water in Pit: <u>718</u> (in.) Depth to Saturated Soil: <u>718</u> (in.)	
Remarks: <u>No indicators present</u>	



# SOILS

Map Unit Name (Series and Phase): <u>Muckalee Loam</u>		Drainage Class: <u>Poorly</u>	
Taxonomy (Subgroup): <u>Typic Fluvaquents</u>		Field Observations Confirm Mapped Type: Yes <input type="radio"/> No <input checked="" type="radio"/>	

**Profile Description:**

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-3		10YR 6/2	—	—	Sand
3-6		10YR 4/2	—	—	Sand
6-16		10YR 5/4	10YR 4/2	few, faint	Sand
16-18+		10YR 4/2	10YR 4/2	few, faint	Loamy Sand

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
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Remarks:  
Non-hydric soils present

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No (Circle) Wetland Hydrology Present? <input type="radio"/> Yes <input checked="" type="radio"/> No Hydric Soils Present? <input type="radio"/> Yes <input checked="" type="radio"/> No	(Circle) Is this Sampling Point Within a Wetland? <input type="radio"/> Yes <input checked="" type="radio"/> No
Remarks:	

Approved by HQUSACE 2/92

DATA FORM  
ROUTINE WETLAND DETERMINATION  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>B-4215</u> Applicant/Owner: <u>NC DOT</u> Investigator: <u>ESSI</u>	Date: <u>8/27/01</u> County: <u>Onslow</u> State: <u>NC</u>
Do Normal Circumstances exist on the site? <span style="float: right;"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> Is the site significantly disturbed (Atypical Situation)? <span style="float: right;"><input type="radio"/> Yes <input checked="" type="radio"/> No</span> Is the area a potential Problem Area? <span style="float: right;"><input type="radio"/> Yes <input checked="" type="radio"/> No</span> (If needed, explain on reverse)	Community ID: <u>Hardwoods</u> Transect ID: <u>HA II</u> Plot ID: <u>upland</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Liquidambar styraciflua</u>	<u>T</u>	<u>FAC+</u>	9. _____	_____	_____
2. <u>Quercus michauxii</u>	<u>T</u>	<u>FACW-</u>	10. _____	_____	_____
3. <u>Fagus grandifolia</u>	<u>T</u>	<u>FACU</u>	11. _____	_____	_____
4. <u>Ilex opaca</u>	<u>S</u>	<u>FAC-</u>	12. _____	_____	_____
5. <u>Vitis rotundifolia</u>	<u>H</u>	<u>FAC</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-) 60%

Remarks:

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>___ Stream, Lake or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 Inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p>___ FAC Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>—</u> (in.)</p> <p>Depth to Free Water in Pit: <u>—</u> (in.)</p> <p>Depth to Saturated Soil: <u>212</u> (in.)</p>	<p>Remarks: <u>No hydrology indicators.</u></p>

# SOILS

Map Unit Name (Series and Phase): <u>Mapped as Muckalee 100m</u>		Drainage Class: <u>Poorly</u>	
Taxonomy (Subgroup): <u>Typic Fluvaquents</u>		Field Observations Confirm Mapped Type: Yes <input type="radio"/> No <input checked="" type="radio"/>	

**Profile Description:**

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-14		10YR 2/1			sandy loam
14+		5B 6 5/1			clay

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
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Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No (Circle) Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No (Circle)
Remarks:	

Approved by HOUACE 2/92

# SOILS

Map Unit Name: Mapped as Marvin loamy sand  
 (Series and Phase):  
 Taxonomy (Subgroup): Typic Hapludults

Drainage Class: well drained  
 Field Observations  
 Confirm Mapped Type: Yes ☒ No

## Profile Description:

Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-10		2.5Y 5/3			loamy fine sand
10+		2.5Y 5/3	2.5Y 6/8	few/distinct	loamy fine sand

## Hydric Soil Indicators:

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol                    | <input type="checkbox"/> Concretions  |
| <input type="checkbox"/> Histic Epipedon             | <input type="checkbox"/> High Organic Content in Surface layer in Sandy Soils |
| <input type="checkbox"/> Sulfidic Odor               | <input type="checkbox"/> Organic Streaking in Sandy Soils                     |
| <input type="checkbox"/> Aquic Moisture Regime       | <input type="checkbox"/> Listed on Local Hydric Soils List                    |
| <input type="checkbox"/> Reducing Conditions         | <input type="checkbox"/> Listed on National Hydric Soils List                 |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (Explain in Remarks)                           |

Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No (Circle)  
 Wetland Hydrology Present? ☐ Yes ☒ No  
 Hydric Soils Present? ☐ Yes ☒ No

Is this Sampling Point Within a Wetland? Yes ☒ No

Remarks:

Approved by HQUACE 2/92

HJL  
 8/93

ROUTINE WETLAND DETERMINATION  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>B-4215</u> Applicant/Owner: <u>NLDOT</u> Investigator: <u>ESI</u>	Date: <u>8-27-01</u> County: <u>Onslow</u> State: <u>NL</u>
Do Normal Circumstances exist on the site? <span style="float: right;"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> Is the site significantly disturbed (Atypical Situation)? <span style="float: right;"><input type="radio"/> Yes <input checked="" type="radio"/> No</span> Is the area a potential Problem Area? <span style="float: right;"><input type="radio"/> Yes <input checked="" type="radio"/> No</span> (If needed, explain on reverse)	Community ID: <u>Hardwoods</u> Transect ID: <u>HA 11</u> Plot ID: <u>wetland</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Nyssa biflora</u>	<u>T</u>	<u>OBL</u>	9. _____	_____	_____
2. <u>Acer rubrum</u>	<u>T</u>	<u>FAC</u>	10. _____	_____	_____
3. <u>Quercus laurifolia</u>	<u>T</u>	<u>FACW</u>	11. _____	_____	_____
4. <u>Plantanus occidentalis</u>	<u>T</u>	<u>FACW-</u>	12. _____	_____	_____
5. <u>Carpinus caroliniana</u>	<u>T</u>	<u>FAC</u>	13. _____	_____	_____
6. <u>Ulmus americana</u>	<u>T</u>	<u>FACW</u>	14. _____	_____	_____
7. <u>Arisaema triphyllum</u>	<u>H</u>	<u>FACW-</u>	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>___ Stream, Lake or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 Inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>  </u> (in.)</p> <p>Depth to Free Water in Pit: <u>  8  </u> (in.)</p> <p>Depth to Saturated Soil: <u>  0  </u> (in.)</p>	<p>Remarks: <u>Saturated @ surface.</u></p>

WB  
WC Wet  
WD

DATA FORM  
ROUTINE WETLAND DETERMINATION  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Bridge No. 4215 - Stones Creek</u>	Date: <u>8/27/01</u>
Applicant/Owner: <u>NCDOT</u>	County: <u>Onslow</u>
Investigator: <u>ESI</u>	State: <u>NC</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Hardwood</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>WB-3</u>
Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No	Plot ID: <u>Wet</u>
(If needed, explain on reverse)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Carpinus Caroliniana</u>	<u>T</u>	<u>FAC</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. <u>Carpinus Caroliniana</u>	<u>S</u>	<u>FAC</u>	11. _____	_____	_____
4. <u>Acer rubrum</u>	<u>S</u>	<u>FAC</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. <u>Athyrium asplenoides</u>	<u>H</u>	<u>FAC</u>	14. _____	_____	_____
7. <u>Woodwardia areolata</u>	<u>H</u>	<u>OBL</u>	15. _____	_____	_____
8. <u>Arisaema triphyllum</u>	<u>H</u>	<u>FACW</u>	16. _____	_____	_____
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-)			<u>6/6 = 100%</u>		
Remarks: <u>Bottomland hardwoods</u>					

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Stream, Lake or Tide Gauge _____</p> <p>Aerial Photographs _____</p> <p>Other _____</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input checked="" type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input checked="" type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>17</u> (in.)</p> <p>Depth to Saturated Soil: <u>6</u> (in.)</p>	
Remarks:	

# SOILS

Map Unit Name (Series and Phase): <u>Muckabee loam</u>		Drainage Class: <u>Poorly</u>	
Taxonomy (Subgroup): <u>Typic Fluvaquents</u>		Field Observations Confirm Mapped Type: Yes <input type="radio"/> No <input checked="" type="radio"/>	

**Profile Description:**

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-4		10YR 3/1	—	—	Sandy loam
4-12		10YR 4/1	—	—	Sandy clay loam
12-18+		10YR 3/1	—	—	Sandy loam

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
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Remarks:  
Hydric soils present

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No (Circle) Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No (Circle)
Remarks:	

Approved by HQUSACE 2/92

WB  
WC Upland  
WD

DATA FORM  
ROUTINE WETLAND DETERMINATION  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Bridge No. 4215 - Stones Creek</u>	Date: <u>8/27/01</u>
Applicant/Owner: <u>NCDOT</u>	County: <u>Onslow</u>
Investigator: <u>ESI</u>	State: <u>NC</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: <u>Hardwood</u>
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: <u>WB-3</u>
Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No	Plot ID: <u>Upland</u>
(If needed, explain on reverse)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Liquidambar styraciflua</u>	<u>T</u>	<u>FAC+</u>	9. <u>Vitis rotundifolia</u>	<u>V</u>	<u>FAC</u>
2. _____	_____	_____	10. <u>Smilax rotundifolia</u>	<u>V</u>	<u>FAC</u>
3. <u>Carpinus caroliniana</u>	<u>S</u>	<u>FAC</u>	11. _____	_____	_____
4. <u>Carya sp.</u>	<u>S</u>	<u>-</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. <u>Athyrium asplenoides</u>	<u>H</u>	<u>FAC</u>	14. _____	_____	_____
7. <u>Arisaema triphyllum</u>	<u>H</u>	<u>FACW-</u>	15. _____	_____	_____
8. <u>Viola sp.</u>	<u>H</u>	<u>-</u>	16. _____	_____	_____
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-) <u>6/6 = 100%</u>					
Remarks:					

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Stream, Lake or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>718</u> (in.)</p> <p>Depth to Saturated Soil: <u>718</u> (in.)</p>	
Remarks:	
<u>No indicators present</u>	



Map Unit Name (Series and Phase):		Muckakee loam	Drainage Class:		Poorly
Taxonomy (Subgroup):		Typic Fluvaquents	Field Observations		
			Confirm Mapped Type:		Yes <input type="radio"/> No <input checked="" type="radio"/>

**Profile Description:**

Depth (inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16t		10YR 4/2	-	-	Fine sandy loam

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
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**Remarks:**

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## WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/> No <input type="radio"/> (Circle)	Is this Sampling Point Within a Wetland?	(Circle)
Wetland Hydrology Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>		Yes <input type="radio"/> No <input checked="" type="radio"/>
Hydric Soils Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>		
Remarks:			

Approved by HQUSACE 2/92

**U.S. ARMY CORPS OF ENGINEERS  
Wilmington District**

Action ID: 200101175

County: Onslow

**Notification of Jurisdictional Determination**

**Property**

**Owner:**

Mr. William D. Gilmore, P.E., Manager  
Project Development & Environmental Analysis  
1548 Mail Service Center  
Raleigh, N.C. 27699-1548 ✓

**Authorized Agent:**

Jeff Harbour, PWS  
Environmental Services, INC  
524 New Hope Road  
Raleigh, North Carolina 27610

**Size and Location of Property (waterbody, Highway name/number, town, etc.):** TIP Project No. B-4215, existing bridge on NC 210 over Stones Creek, Onslow County, North Carolina.

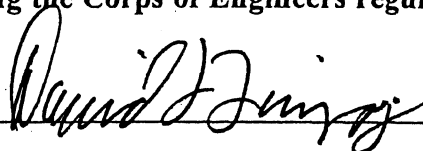
**Basis for Determination:** Onsite field inspection of selected wetland sites.

**Indicate Which of the Following apply:**

- ☐ There are wetlands on the above described property which we strongly suggest should be delineated and surveyed. The surveyed wetland lines must be verified by our staff before the Corps will make a final jurisdictional determination on your property.
- ☒ On October 10, 2001, the undersigned inspected the Section 404 jurisdictional line as determined by the NCDOT and/or its representatives for the subject NCDOT project. A select number of wetland sites were inspected for the proposed project and all were found to accurately reflect the limits of Corps jurisdiction. The Corps believes that this jurisdictional delineation can be relied on for planning purposes and impact assessment.
- ☐ The wetlands on your lot have been delineated and the limits of the Corps jurisdiction have been explained to you. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- ☐ There are no wetlands present on the above described property which are subject to the permit requirements of section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- ☐ The project is located in one of the 20 Coastal Counties. You should contact the nearest State Office of Coastal Management to determine their requirements.

Placement of dredged or fill material in wetlands on this property without a Department of the Army permit is in most cases a violation of Section 301 of the Clean Water Act (33 USC 1311). A permit is not required for work on the property restricted entirely to existing high ground. If you have any questions regarding the Corps of Engineers regulatory program, please contact Mr. Dave Timpy at 910-251-4634.

Project Manager Signature



Date January 2, 2002

Expiration Date January 2, 2007

**SURVEY PLAT OR FIELD SKETCH OF DESCRIBED PROPERTY AND THE WETLAND DELINEATION FORM MUST BE ATTACHED TO THIS FORM.**

